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MEDICAL ANNALS

of the

DISTRICT OF COLUMBIA

Official Publication of
THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

VOLUME XXX
1961

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BOOK REVIEWS

Classics of Medicine and Surgery (formerly titled: Epoch-making Contributions to Medicine, Surgery and the Allied Sciences) collected by C. N. B. CAMAC. Price (paper), $2.25. Pp. 435. New York: Dover, 1959.

This is an excellent volume and its contents should be read very carefully by all physicians. The author has gathered together the original writings and research of the finest of the old master physicians, such as Lord Lister on Antisepsis, William Harvey on the Circulation of the Blood, Leopold Auenbrugger on Percussion of the Chest, Auscultation and the Stethoscope by Laennec, Vaccination against Smallpox by Edward Jenner, Anesthesia by W. T. G. Morton, and lastly Puerperal Fever by O. W. Holmes.

The thoroughness, depth, and accuracy with which these fine physicians penetrated the almost unknown without a vast array of laboratory equipment should make our present day investigators realize how little they actually produce with so much to work with in comparison.

The simplicity and directness of their writings with the absence of obfuscation is a lesson to all medical writers.

It was my pleasure to review this book and add it to my library for rereading from time to time.

I. PHILLIPS FROHMAN, M.D.

Encyclopedia of Medical Syndromes. ROBERT H. DURHAM, M.D., F.A.C.P. Price, $13.50. Pp. 628. New York: Hoeber-Harper, 1960.

This volume fills a long-felt need. Medical readers are often appalled when rare syndromes are mentioned, especially those carrying men's names. Some syndromes go by more than one title. In the case of most syndromes the etiology is unknown. There are also variations of many of them. Some conditions called syndromes are also called diseases. The author describes nearly 1,000 syndromes, giving synonyms, cross references, the characteristic features, variations, experiences and opinions of writers on the subject, and medical references. This list does not include all of the syndromes, this reviewer having found a number not included. Nonetheless, the book is of great value, especially to teachers and medical editors. Standard medical dictionaries define many of these syndromes, but their lists are far from complete and the descriptions are naturally skimpy. Dr. Durham, unfortunately, does not include diseases designated by men's names unless they are also called syndromes. The syndromes are presented in alphabetical order, and the book concludes with a unique index with the syndromes listed by categories, principally of systems of the body.

W. M. Y.

Nine Months' Reading. A Medical Guide for Pregnant Women. ROBERT E. HALL, M.D. Illustrated by Robert Demarest. Price, $2.95. Pp. 191. Garden City, N. Y.: Doubleday, 1960.

In the 191 pages of this book Dr. Hall manages to tell the patient almost everything that the average American woman would like to know about herself during her pregnancy. There is a section devoted to "natural childbirth," and the author rightly points out that the better term is "prepared childbirth."

I am critical of the condescending manner which is used at times. Also, Dr. Hall states his own management, rather dogmatically, of obstetrical problems in which there is a difference of medical opinion. This book may very well be used by Dr. Hall's patients, but I'm sure that most obstetricians would prefer to have the opportunity to present their own viewpoint to their patients and thereby gain a necessary rapport.

The glossary may be quite helpful if the patient cannot avail herself of a standard dictionary.

AVRON H. MASER, M.D.

Cardiac Emergencies and Related Disorders: Their Mechanism, Recognition and Management. HAROLD D. LEVINE, M.D. Price, $12.00. Pp. 381. New York: Landsberger, 1960.

In defining cardiac emergencies, Dr. Levine points out that relatively few situations are catastrophic and require immediate decision and action. Many serious and urgent cardiac problems allow time for careful deliberation prior to instituting therapy. Thus this monograph encompasses a wide range of situations the practitioner is likely to encounter.

The more common cardiac emergencies, such as acute left ventricular failure, cardiogenic shock, pulmonary embolism and the arrhythmias, are well covered. Among the less urgent cardiac situations discussed are refractory congestive failure, electrolyte disturbances, and digitalis intoxication. A helpful chapter on unusual and noncardiac causes of chest pain is wisely included.

A book of this nature must necessarily offer proven therapeutic measures for handling such serious and sometimes most difficult conditions. With the exception of an excellent discussion on cardiac arrest and resuscitation, very little new information is presented.

It would appear that a serious omission is committed by neglecting the more recently appreciated field of pediatric cardiac emergencies. In view of current knowledge and understanding of heart disease in children and especially in infants, and with the present excellence of cardiac surgery, this problem surpasses in importance many of the situations here considered.

(*Continued on page 31*)

Book Reviews

(Continued from page 28)

This book should best serve the internist, general practitioner, and house officer.

Robert T. Kelley, M.D.

Current Surgical Management II. A Book of Alternative Viewpoints on Controversial Surgical Problems. Editors: John H. Mulholland, M.D., Edwin H. Ellison, M.D., and Stanley R. Friesen, M.D., with contributions by 50 authorities. Price, $8.00. Pp. 348, illustrated. Philadelphia: Saunders, 1960.

This is the second volume by the same editors, the first being "Current Surgical Management." It is not a revision or a second edition of the first, but should be considered an extension. Further controversial subjects are considered in this volume as well as other aspects of topics considered in Volume I. More common matters are considered rather than trivial material, and they are presented in a manner reminiscent of "How I Do It" clinics which have been such a huge success at regional and national meetings of the American College of Surgeons.

Each section of controversial subjects is preceded by an introduction by one of the editors, which is similar to the remarks of a chairman at a symposium. The first of the topics presented is Duodenal Ulcer and Its Complications. In this are presented some unusual aspects, such as (1) X-ray irradiation of the stomach as an adjunct to the medical treatment of peptic ulcer, (2) vagotomy, pyloroplasty, and supra-antral segmental resection for treatment of duodenal ulcer, (3) also vagotomy, antrectomy and end-to-end gastroduodenostomy, and (4) segmental resection for peptic ulcer. All of these are presented by nationally known authors.

Other topics presented are: Repair of Esophageal Hiatal Hernia, Choice of Operation for Carcinoma of the Head of the Pancreas, Detection of Common Duct Stones and Management of Common Duct Wound. Subtopics cover radical and palliative procedures for carcinoma of the head of the pancreas, and management of common duct wounds by T-tube drainage and primary closures. The various aspects and arguments, for and against, are well presented. A total of 10 more subjects are presented covering topics from Repair of Common Bile Duct Stricture to Pathogenesis and Management of Pilonidal Sinus, and even to Thromboembolism and Renal Failure.

In general, the reviewer has found this an exceptionally interesting book. The subject matter is clear, concise and stimulating. One may not agree with some or most of the articles presented; however, any general surgeon could learn a great deal by reading this book and, along with its predecessor, it should be a valuable adjunct to his library.

Philip Burka, M.D.

Bedside Diagnosis, 5th ed. Charles Seward, M.D., F.R.C.P. (Edin.). Price, $6.00. Pp. 479. Baltimore: Williams & Wilkins, 1960.

This book was first published in 1949. The author has chosen a number of more common and more important symptoms and has discussed them first from the standpoint of general considerations and then in association with specific diseases in which the symptom is an outstanding feature. The diseases are grouped under various headings, such as systems or regions of the body, with subgrouping in different categories. The organization does not follow any set pattern. Psychogenic symptoms are first discussed. This discussion is followed by a very good one on "Some General Considerations Regarding Pain." Then come 6 chapters on pain in six different regions of the body. These are followed by 15 chapters on other important symptoms. The last 3 chapters are "Drugs Considered as Causes of Symptoms," "Some Uses of Radioactive Isotopes in Diagnosis," and "Normal Values." The normal values are grouped under systems, and these are followed by a discussion of agglutination and complement-fixation tests and electrophoresis, ending with a table of normal values. The book is well written and the subject matter presented clearly and succinctly.

W. M. Y.

Communicable and Infectious Diseases: Diagnosis, Prevention, Treatment, 4th ed. Franklin H. Top, A.B., M.D., M.P.H., F.A.C.P., F.A.A.P., F.A.P.-H.A., and 21 collaborators. Price, $20.00. Pp. 812 with 122 figures and 15 color plates. St. Louis: Mosby, 1960.

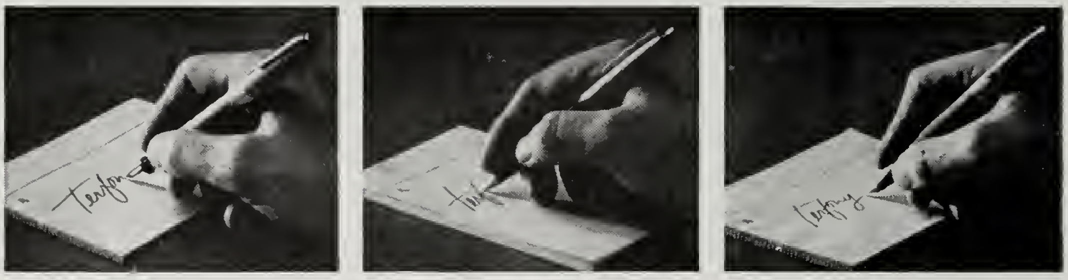
The new edition of this classic volume finds the format not significantly changed and the illustrations typical of the diseases under discussion (courtesy, Parke, Davis). It remains the reference supreme on infectious and communicable diseases and should occupy a portion of the medical bookshelf of every physician.

Dr. Top et al have extensively revised the sections on immunity, sensitivity reactions, and auto-immune mechanisms to parallel the state of our clinical and laboratory knowledge. The material is presented in a concise and logical manner, with the emphasis on the clinical manifestations of these mechanisms.

The paragraphs dealing with treatment of the various diseases under discussion are realistic and surprisingly up-to-date considering the velocity of new developments in antibiotics and chemotherapy. Most works of this nature, between the writing of the treatise and the time of publication, become hopelessly antiquated because of the rapidity of change in this field.

Here is the ideal text for medical student or practicing physician—concise, up-to-date, and comparatively free of the outmoded encumbrances that still remain the bugbears of handling of many of these diseases.

Stanley W. Kirstein, M.D.



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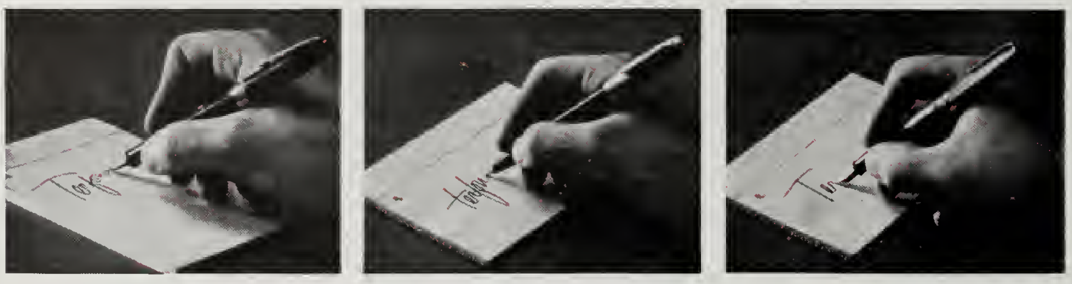

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MEDICAL ANNALS
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January 1961 VOLUME XXX • NUMBER 1

Clinical Evaluation of Griseofulvin in 327 Patients with Dermatomycosis*

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GRISEOFULVIN is a metabolic product of several strains of Penicillium. Unlike other such products, however, it is not at all antibacterial but, rather, antifungal. Its discovery in 1939[1] and its subsequent use in agriculture have been amply documented. Not until it proved effective against induced tinea in guinea pigs by Gentles[2] in mid-1958 did it stir wide interest in the medical world. The first reports by Riehl,[3] Williams et al[4] and Blank and Roth[5] of its successful use in humans with dermatomycoses followed rapidly, in late 1958. Since then it has been under the most intensive clinical trial by investigators all over the world.

We have been fortunate enough to have had griseofulvin† available to us since January, 1959. Following our preliminary report[6] and after 1 year of clinical trial we thought that it might be fruitful to take pause, compile our results, and evaluate this new drug as regards its efficacy, toxicity and shortcomings.

As of January, 1959 our study included 327 patients with all clinical varieties of dermatomycoses. The diagnosis was proved by laboratory confirmation,[7] i.e., positive KOH direct mount in all cases, positive culture in most cases, and Wood's light examination in all scalp cases. We shall digress for a moment to emphasize the importance of establishing the diagnosis of fungous infection by laboratory methods. It is conceded by expert dermatologists that clinical appearance of the presenting dermatosis is not always sufficient for the recognition of tinea, that ringworm is not always ringed, that ringed lesions are not always ringworm, and that other dermatoses mimic tinea, and vice versa.

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* Presented at the Thirty-fifth Annual Congress of the Pan American Medical Association, held in Mexico City, Mexico, May 2–11, 1960.

† Supplied as Fulvicin by Dr. Kenneth Hawkins of Schering Corporation, Bloomfield, New Jersey.

Furthermore, since griseofulvin is effective only against the Microsporum, Trichophyton and Epidermophyton species of fungi, one should know when he is dealing with other nonsusceptible fungi, such as *Malassezia furfur* (cause of tinea versicolor), *Candida albicans* (cause of moniliasis), and the entire group of fungous organisms which cause the deep mycoses. Only when definite mycologic diagnosis is established will one avoid the mistakes of crediting griseofulvin with the cure of a nonfungal disease, and of discrediting the drug for not curing an assumed fungal disease.

To return to our clinical study, we shall break down our cases into 6 categories depending upon the sites of involvement, namely, tinea capitis, barbae, corporis, cruris, pedis and unguium.

The drug was administered orally in the form of 250 mg. tablets. Most adults received 4 tablets daily; children 2 or 3 tablets daily, and youngsters 3 years old or younger usually received 1 tablet daily. Neither topical therapy nor mechanical débridement nor nail removals were employed unless so stated. Our aim was to ascertain what griseofulvin could do by itself.

TABLE 1

Tinea Capitis

54 Males, 6 Females

Infecting Organism	No. of Patients	Age Range	Duration of Treatment (Avg.)	Result
M. audouini	53	8 mos.–13 yrs.	2 wks.–6 mos. (6 wks.)	Cured, 51; improving, 2
M. canis	2	5 and 8 yrs.	6 and 8 wks. (7 wks.)	Cured, 2
T. tonsurans	5	2½–10½ yrs.	6–10 wks. (8 wks.)	Cured, 5

Tinea capitis. Our study includes 60 children. *M. audouini* was the etiologic agent in most cases, with a few due to *M. canis* and *T. tonsurans.* The infection cleared up in all patients but 2, who were improving, in an average of 6 to 7 weeks. Some children required several months. Review of their charts revealed that these children followed an interrupted course of therapy. We have been able to show that interruption of therapy in these cases considerably delays the time for cure and that continuous therapy invariably cures tinea capitis[8] (table 1).

Considering that the former treatment for tinea capitis was almost entirely inept and required many months to years for cure, we are of the opinion that griseofulvin is a specific effective remedy for this condition.

Tinea barbae. We have had only 3 such patients, all of them with boggy suppurative lesions of the upper lip (figure 1). The offending organism in 2 was *T. rubrum,* in 1, *T. mentagrophytes.* Clearing was achieved in all in a period of 3 weeks (table 2).

TABLE 2

Tinea Barbae

3 Males

Infecting Organism	No. of Patients	Age Range	Duration of Treatment	Result
T. mentagrophytes	1	30 yrs.	3 wks.	Cured, 1
T. rubrum	2	27 and 35 yrs.	3 wks.	Cured, 2

Tinea corporis. Of 50 patients, most of them due to *T. rubrum,* all were cured, usually within 4 to 6 weeks (figure 2). Itching was relieved within 2 to 5 days (table 3). Some investigators have described clinical and mycologic relapses after, and even during treatment. This has not occurred in our series, except on the feet. Duration of infection was not a factor. Infections of 25 years' duration responded as well as infections of only a few weeks.

Griseofulvin is the best available remedy for tinea corporis. It is not necessarily indicated in the sparse, ringed eruptions commonly seen in children, since they are self-limited and responsive to external agents. It is definitely

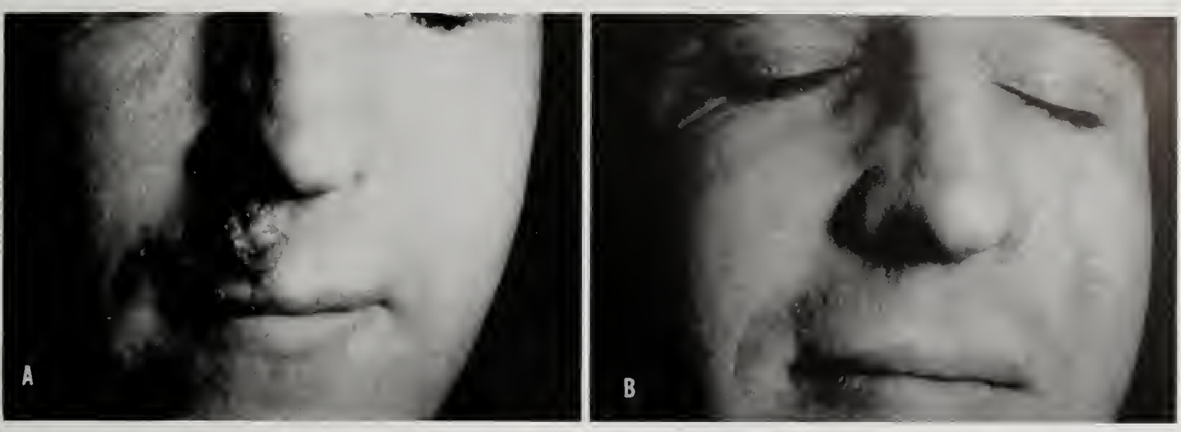

FIG. 1, A and B. Tinea barbae. Before, and after 3 weeks of griseofulvin therapy.

TABLE 3
Tinea Corporis
41 Males, 9 Females

Infecting Organism	No. of Patients	Age Range	Duration of Treatment (Avg.)	Result
M. audouini	1	10 yrs.	2 wks.	Cured, 1
M. canis	1	79 yrs.	2 wks.	Cured, 1
T. mentagrophytes	3	2–15 yrs.	4–10 wks. (6 wks.)	Cured, 3
T. rubrum	41	14–50 yrs.	2–12 wks. (6 wks.)	Cured, 41
Unidentified	4	28–62 yrs.	3–8 wks. (4 wks.)	Cured, 4

indicated, however, in the protracted plaque-like and large circinate lesions, usually of *T. rubrum* etiology. It is true that local measures are often successful, but relapse is common.

Tinea cruris. Of 32 patients, all were cleared in 2 to 6 weeks, with no recurrences to date, regardless of the duration of infection (figure 3). Pruritus was relieved within a few days (table 4).

TABLE 4
Tinea Cruris
31 Males, 1 Female

Infecting Organism	No. of Patients	Age Range	Duration of Treatment (Avg.)	Result
E. floccosum	9	16–52 yrs.	2–4 wks. (2 wks.)	Cured, 9
T. mentagrophytes	1	60 yrs.	4 wks.	Cured, 1
T. rubrum	18	13–50 yrs.	2–6 wks. (4 wks.)	Cured, 18
Unidentified	4	44–62 yrs.	3–6 wks.	Cured, 4

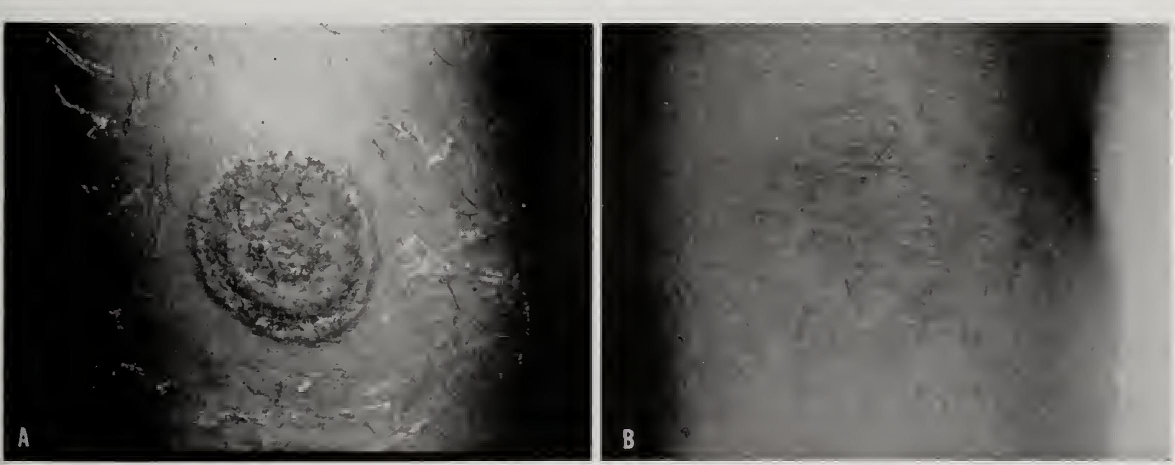

FIG. 2, A and B. Tinea corporis, left arm. Before, and after 2 weeks of griseofulvin therapy.

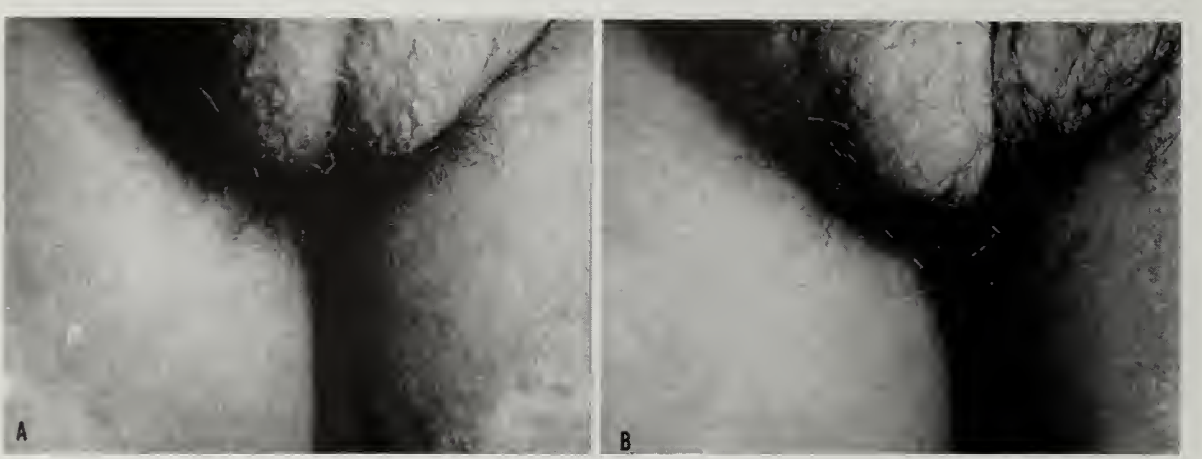

FIG. 3, A and B. Tinea cruris. Before, and after 6 weeks of griseofulvin therapy.

Monilial intertrigo is not helped and may even be made worse, but is not the subject of this paper. When mixed infection occurs, i.e., susceptible dermatophyte and candida fungi, griseofulvin therapy produces an early improvement. When a standstill or exacerbation occurs, it is wise to prescribe local mycostatin powder, lotion or ointment to counteract the monilial component.

Tinea pedis. Results were not as good in this category. Of 96 patients, almost a third failed to clear entirely. Further breakdown of these cases is required to shed light on this apparent mystery. According to the involving organism, all 4 patients with *E. floccosum* infection cleared up in 3 to 6 weeks. In *T. rubrum* infections 47 of 57 cleared up. The worst results were in *T. mentagrophytes* infection in which only 8 of 24 patients cleared entirely. A further breakdown as to type of clinical involvement shows another trend. Of the 26 failures most were due to lingering or recurrent interdigital involvement, chiefly of toe spaces 3 and 4. In all cases the toe-web manifestations were greatly improved but not entirely cleared, positive direct mounts and or positive cultures persisting in 1 patient even after 7 months of continuous griseofulvin therapy. Practically all of these persisting cases demonstrated hyperhidrosis of the feet. Only 2 or 3 recurrences of plantar scaling were noted, again on hyperhidrotic feet. Antimonilial therapy was of no help. Keratolytic therapy was of great assistance, clearing up most of the persisting cases (table 5).

TABLE 5

Tinea Pedis

73 Males, 23 Females

Infecting Organism	No. of Patients	Age Range	Duration of Treatment (Avg.)	Result
E. floccosum	4	28–50 yrs.	3–6 wks.	Cured, 4
T. mentagrophytes	24	7–46 yrs.	5–10 wks. (7 wks.)	Cured, 8; improving, 15; discontinued, 1
T. rubrum	57	18–70 yrs.	3–12 wks. (6 wks.)	Cured, 47; improving, 10
Unidentified	11	25–53 yrs.	3–8 wks. (4 wks.)	Cured, 9; improving, 1; discontinued, 1

It is apparent that tinea pedis is not purely a fungous infection. It appears to be due to a complex of factors. In general, the torpid type of moccasin area involvement characteristic of *T. rubrum* infection does well. The intertriginous type of involvement, in most cases due to *T. mentagrophytes* infection, does well as a rule but, when persistent, requires the old-fashioned local therapy in addition to the use of griseofulvin. The combination is better than external therapy alone. Of local factors associated with persistence of infection, hyperhidrosis seems to

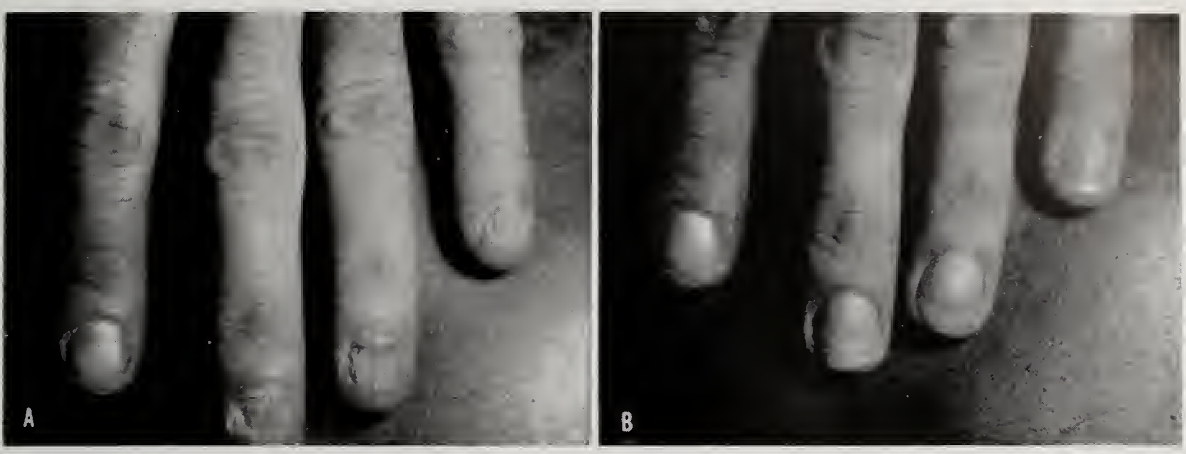

FIG. 4, A and B. Onychomycosis, fingernails. Before, and after 3½ months of griseofulvin therapy.

be the most important and thickness of keratin, of lesser importance.

Tinea unguium (*onychomycosis*). Of 86 patients, 27 were cured at the time of our compilation (figures 4 and 5). Of the 27 cured patients, the lesions of 24 were confined to the fingernails. Time for cure was 3 to 7 months for the fingernails, and 8 to 12 months for the 3 cured toenail cases (table 6). All nails showed some degree of improvement on adequate dosage. In general, the time necessary for cure of toenails is quite long, and disconcerting things occur. For example, some nails improve rapidly while other nails lag behind. The nails of one foot or hand may grow faster than its contra-

TABLE 6

Tinea Unguium

59 Males, 27 Females

Infecting Organism	No. of Patients	Age Range	Duration of Treatment (Avg.)	Result
T. mentagrophytes	6	24–46 yrs.	3–8 mos. (5 mos.)	Improving, 6
T. rubrum	65	17–64 yrs.	3–12 mos. (5 mos.)	Cured, 24; improving, 40; discontinued, 1
Unidentified	15	25–61 yrs.	3–8 mos. (2 mos.)	Cured, 3; improving, 9; discontinued, 3

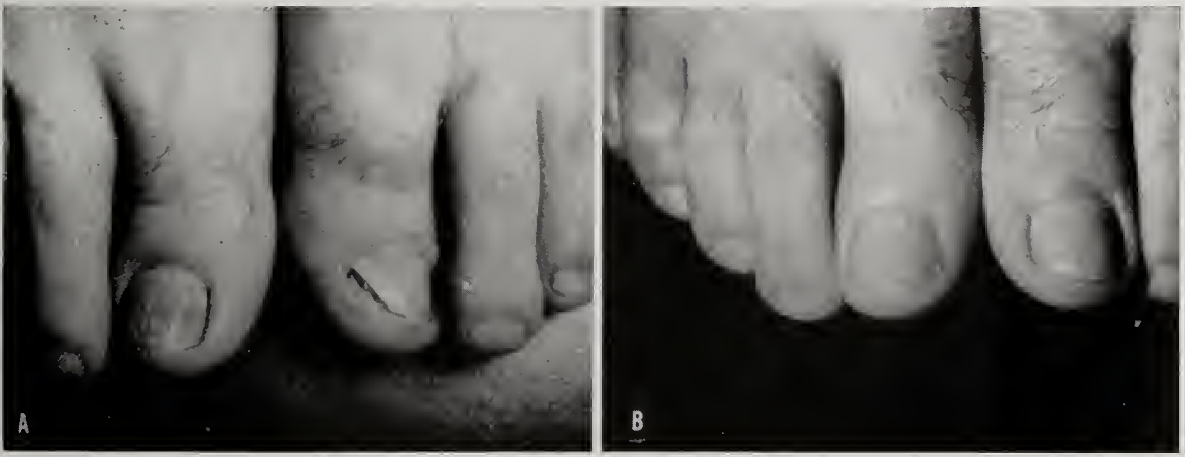

FIG. 5, A and B. Onychomycosis, toenails. Before, and after 10 months of griseofulvin therapy.

lateral members. Some nails, particularly the great toenails, may progress to a certain point and then stop. The fourth and fifth toenails are often stunted or thickened or amberlike and may show no improvement whatever.

Most disconcerting of all is the phenomenon which we have called the "yellow streak." This consists of either a slow or sudden appearance of a yellow line down the center of a nail, mostly on toenails and more often on the great toenail. This is due to the formation of a ridge of nail-bed hyperkeratosis, which is mycologically positive and is, therefore, a relapse of infection. Insufficient time has elapsed to allow of conclusive generalizations on the subject of onychomycosis.

It can be said, however, that griseofulvin is the only agent that has ever succeeded in growing out fungus-infected nails (except monilial). Almost all fingernail patients who have persisted in their treatment for a long enough period have acquired normal nails. Toenail growth has been relatively disappointing, but griseofulvin is still the only available medication. Lately we have been removing some toenails prior to instituting therapy. The results are not yet in.

Inasmuch as recent work indicates that the chronically infected person lacks some factor in his immunity mechanism, there is no doubt that he, under the proper circumstances, will become reinfected. Some patients relapse shortly after therapy has been discontinued even though outwardly they had cleared up well. Such patients may require maintenance doses over a long period of time.[9] Thus far relapsed patients have responded well to a second course of griseofulvin.

Griseofulvin was tolerated very well. Transient side-effects such as headache, nausea and gastrointestinal distress occurred in 10 patients (3 per cent) early in the period of therapy. These effects disappeared despite continued administration of the drug. In 6 patients (2 per cent) there were side-effects which required discontinuance of the medication. These were:

	No. Patients
Headache, severe, entire first week (patient previously subject to headaches)	1
Paresthesias of hands and feet (after prolonged and high dosage)	1
Dry mouth, thirst, polydipsia, substernal ache, fatigue	1
Rash: morbilliform and urticarial	1
Nausea, vomiting and diarrhea (long history of "colitis")	1
Nausea and regurgitation (in a postgastrectomy patient)	1
	6

All symptoms subsided promptly after cessation of therapy. There were a dozen or so known penicillin reactors in this series. None of them had side-effects.

CONCLUSIONS

One year's experience with griseofulvin in the treatment of 327 patients with dermatomycoses has been summarized.

Complete clearing was achieved in all patients with tinea capitis, barbae, corporis and cruris.

Tinea pedis was cleared up in most cases and in the remaining cases, improved. Most of the persistent cases are of the intertriginous variety, associated with hyperhidrosis and most often due to infection with *T. mentagrophytes*. Adjunct local keratolytic therapy is required in such cases.

Onychomycosis of the fingernails was successfully cured in most cases in 3 to 8 months. The toenails require about a year. Some have not cleared up even in this time. More than one year's study of onychomycosis is necessary for the elucidation of the factors pertaining to this entity.

On the whole, griseofulvin has proved to be a most valuable drug in the treatment of the various dermatomycoses and has shown no serious toxic reactions to date.

(Weiner) 915 19th Street, N.W.
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(Continued on page 58)

Control of Emesis in Cancer Patients with Trimethobenzamide

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G. LENNARD GOLD, M.D.

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THE CONTROL OF EMESIS is one of the problems encountered in the treatment of patients with advanced cancer. The symptoms may be psychic in origin, the result of narcotic medication or of anticancer therapy, or due to the disease process itself. Metabolic derangements secondary to the metastatic cancer such as uremia or hypercalcemia are also frequent causes of these distressing symptoms.

Some of the drugs employed in cancer chemotherapy initiate vomiting by stimulating the chemoreceptor trigger zone in the floor of the fourth ventricle, which in turn activates the vomiting center through internuncial neurons.[1] Chinn and Wang demonstrated that dogs with ablated chemoreceptor trigger zones were refractory to radiation sickness,[2] and many patients undergoing radiation therapy obtain relief from nausea and vomiting with drugs which depress this area in the brain.[1]

Trimethobenzamide* is a new chemical compound which has been shown to have specific antinauseant and antiemetic properties.[3–5] Pharmacologically its action appears to be primarily on the chemoreceptor trigger zone,[5] and, while it effectively depresses the emetic mechanism, it has no other pharmacologic action. In addition, it has a very low order of toxicity. Clinical studies have shown it to be as effective as other antiemetic agents and exceptionally well tolerated.[3, 6, 7] Excellent results have been reported in the control of nausea and vomiting in cancer patients, most of whom were undergoing radiation therapy.[6, 8, 9] It was decided to study its antiemetic activity primarily in patients receiving anticancer therapy but also in those whose symptoms were due to the disease or its complications.

METHODS AND MATERIALS

A total of 65 patients with advanced cancer received trimethobenzamide for the control of nausea and vomiting associated with anticancer therapy or complications of the disease, or due to the disease process itself. There were 35 females and 30 males, ranging in age from 26 to 89 years.

Fifty-seven of the patients received only trimethobenzamide and were divided into 4 groups according to the probable causes of symptoms. In Group I there were 30 patients undergoing cancer chemotherapy, 25 receiving alkylating agents and 5, antimetabolites. In Group II 10 patients were receiving radiation therapy. There were 3 patients with hypercalcemia in Group III and 14 patients with nausea and vomiting due to the disease process itself in Group IV. The dosage for these patients was 200 mg. initially, either orally or intramuscularly, followed by 100 mg. 4 times a day. Patients who did not respond on this dose were given 200 mg. 4 times a day. The duration of treatment varied from 2 to 14 days according to the needs of the patients.

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* Supplied as Tigan by Hoffmann-La Roche, Inc., Nutley, New Jersey.

In the remaining 8 patients a placebo was alternated with the active medication. Six of these were receiving uracil mustard, a new experimental alkylating agent which invariably produced moderate to severe nausea and vomiting with the dose being tested. Two other patients had severe nausea and vomiting secondary to X-ray therapy for metastatic carcinoma. All received an initial dose of trimethobenzamide, 200 mg. orally, followed by 100 mg. 4 times a day. Duration of treatment was from 1 to 7 days. Unknown to the patients and those observing them, placebo capsules were substituted for the active drug at varying intervals.

Patients were observed for degree of therapeutic effect, latent period before effect, duration of effect, and the presence of possible side-reactions such as dizziness, blood pressure changes, sedation, dyspnea, and nasal congestion. Laboratory studies performed on all patients included hematologic tests consisting of leukocyte, reticulocyte and platelet counts, hemoglobin determination and hematocrit, serum bilirubin, alkaline phosphatase, thymol turbidity, cephalin flocculation and bromsulphalein retention. Complete urinalyses were also performed as well as tests for blood urea nitrogen, and serum sodium, potassium and chloride and CO_2. The severity of nausea and vomiting was graded: 0 none, 1+ mild, 2+ moderate, and 3+ severe. Patients were observed before and after treatment and the results of treatment rated as "effective" if nausea and vomiting were completely relieved, "partially effective" if symptoms were improved from 1 to 2 grades, and "ineffective" if there was no change.

RESULTS

Results of treatment for Groups I to IV are summarized in table 1. Thirty or 52.6 per cent of these patients were relieved of all symptoms. In 12 or 21.1 per cent the drug was partially effective, and in 15 (26.3 per cent) it was ineffective. Results were the least satisfactory in the 14 patients who had nausea and vomiting due to the disease process itself. Of these, the drug was effective in 6, partially effective in 2, and ineffective in 6.

All of the 8 patients receiving the placebo demonstrated an initial good response to trimethobenzamide after having 2+ to 3+ degree of nausea and vomiting before medication. The symptoms recurred when the placebo capsules

TABLE 1

Evaluation of Results with Trimethobenzamide

No. of Patients	Probable Cause of Nausea and Vomiting	Degree of Nausea and Vomiting* before Medication	Response		
			Effective	Partially Effective	Ineffective
Group I: 30	Chemotherapy	2+ 3+	17	6	7
Group II: 10	X-ray therapy	2+ 3+	6	2	2
Group III: 3	Hypercalcemia	2+	1	2	
Group IV: 14	Disease process	2+ 3+	6	2	6
Total: 57			30 52.6%	12 21.1%	15 26.3%

* See text for explanation.

were substituted for the active drug. With the placebo the degree of nausea and vomiting continued to be 2+ to 3+, while with the drug the symptoms either completely disappeared or were extremely mild (0–1+). These results are summarized in table 2.

TABLE 2

Summary of Results with Trimethobenzamide and Placebo

No. of Patients	Probable Cause of Nausea and Vomiting	Degree of Nausea and Vomiting			
		Before Medication	Trimethobenzamide	Placebo	Trimethobenzamide
6	Chemotherapy	2+ & 3+	0 & 1+	2+ & 3+	0 & 1+
2	X-ray therapy	3+	0	2+	0

The latent period of drug effect with the oral route was from 20 minutes to 2 hours, and 20 minutes with the intramuscular route. The effectiveness of the drug lasted for an average of 3 hours.

Two patients experienced dizziness and 1 became slightly drowsy. Laboratory studies revealed no abnormal changes after the administration of trimethobenzamide.

DISCUSSION

The relief of nausea and vomiting in patients receiving anticancer chemotherapy or X-ray therapy in this study is in agreement with other clinical reports.[6, 8, 9] The antiemetic effectiveness of trimethobenzamide is apparently due to its specific action on the chemoreceptor trigger zone, and other pharmacologic effects are usually absent. The side-effects observed in the present study cannot be specifically attributed to the administration of trimethobenzamide, since many factors play a role in causing dizziness or sedation in cancer patients. It is possible that the symptoms are due to the anticancer therapy or narcotic medication or to the disease process itself. In a study by Brandman[10] 6 patients complained of dizziness during the treatment period, but 1 had dizziness during the medication-free follow-up period, and 4 of the patients complained of mild dizziness during the time they were on a placebo. These were the only side-effects observed, confirming previous observations,[4, 9, 10] although the complete absence of side-effects has also been reported.[3, 6, 7, 11, 12] The absence of any significant changes in the laboratory findings also attests to the drug's safety.

The rapid onset of action (20 minutes) for patients who received trimethobenzamide intramuscularly compared with the onset in patients receiving the drug orally (20 minutes to 2 hours) would indicate that the intramuscular route of administration is to be preferred. However, this is not in agreement with results obtained by other investigators[3, 4, 12] using trimethobenzamide, who found no significant difference in the time of onset in patients receiving the drug orally or intramuscularly. Regardless of the route of administration, these investigators found the average time of onset of action to be about 25 minutes.

The comparatively short span of action of trimethobenzamide may actually be desirable, because there is less danger of incorrect diagnosis due to masking of the condition by the antiemetic.[6]

SUMMARY

Trimethobenzamide was administered to 65 patients with advanced cancer for the relief of nausea and vomiting due to anticancer therapy, the disease process itself, or its complications.

Of 57 patients who received only trimethobenzamide, the drug was effective in 52.6 per cent, partially effective in 21.1 per cent, and ineffective in 26.3 per cent.

Eight patients who received a placebo alternating with the use of the drug demonstrated a good response to trimethobenzamide, but nausea and vomiting remained the same during administration of placebo capsules as when no medication was given.

The latent period of drug effect was from 20 minutes to 2 hours with oral administration, and

(*Continued on page 59*)

Transpulmonary Absorption of Ergotamine Tartrate for Vascular Headaches*

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ERGOTAMINE TARTRATE has been the agent of choice for the symptomatic treatment of vascular headache attacks for over 25 years.[1] Its effectiveness, estimated at between 80 and 85 per cent of proper cases of migraine, histaminic cephalalgia, and the vascular phase of tension headaches, has led many to believe that this agent approaches as close to a specific remedy as exists in any branch of pharmacology. Wolff and associates[2] clearly demonstrated the vasoconstrictive action of ergotamine tartrate. The demonstration was clear that the severity of the headache was proportionate to the amplitude of pulsation of the affected artery and that the concomitant reduction in the amplitude of pulsation induced by ergotamine tartrate was likewise associated with a diminution to absence of the appreciation of head pain. More recently, the question of serotonin in relation to the migraine attack has come up. This is of particular interest, since a potent antiserotonin agent, methyl-lysergic acid, a derivative of lysergic acid, the nucleus of all ergot alkaloids, has been suggested as being of prophylactic value and symptomatic benefit in both migraine and histaminic cephalalgia.[3] Much work will need to be done in this regard to answer the questions raised on this hypothesis.

The early introduction of ergotamine tartrate for vascular headaches was attended by a relatively high incidence of undesirable side-effects. The chief of these, nausea and vomiting, occurs in approximately one-third of the treated patients, and to confuse the matter, approximately 20 per cent of the untreated patients with migraine headaches. The vascular complications of ergotamine therapy have been considerably reduced by emphasis on suitable indications and contraindications for the use of ergotamine. The sporadic reports of vascular accidents[4, 5, 6] occurring following the administration of ergotamine tartrate for migraine headache have emphasized the relative infrequency of these complications. Nevertheless, continued investigation over the past two decades has been exerted in an attempt to find agents or combinations of agents which would enhance the potency and reduce the toxicity of this drug. In addition, new routes of administration have been tried in order to encourage self-administration of medication by the patient with a minimum of side-reactions.

Historically, the first modification of ergotamine tartrate was the dihydrogenated form of ergotamine, as reported by Horton et al[7, 8] and by Blumenthal.[9] This agent, while less potent on a mg. for mg. basis, had less gastrointestinal reaction when given intravenously. Unfortunately, the agent is relatively less effective when given subcutaneously or intramuscularly but is a good agent in the hands of the physician who has the opportunity to treat the early phase of migraine by intravenous administration.

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Subsequently it was determined that caffeine enhanced the vasoconstrictive effect of ergotamine in the combination of 100 mg. of caffeine with 2 mg. of ergotamine tartrate.[10] For the first time a palatable tablet for self-administration of oral medication for the migraine patient was available. The effectiveness of this medication was limited by the fact that gastrointestinal upsets, being common both in migraine and as a consequence of ergotamine therapy, would at times reduce the effectiveness of the medication by mouth, or at best make regular absorption of the medication an undependable factor. Combinations of antispasmodics[6] and antiemetics with sedatives and other analgesics have been developed for oral administration. In an attempt to bypass the gastrohepatic route of absorption, suppositories of ergotamine and combinations[11] have been developed with considerable success in patients willing and able to take this form of medication. Subsequently, with the same objective of bypassing gastrohepatic absorption, ergotamine tartrate by sublingual administration[12] has been recommended and adopted.

Most recently, development of convenient, portable apparatus for self-administration of nebulized particles of epinephrin and isopropyl epinephrin though a device known as a Medihaler prompted the suggestion that ergotamine tartrate might similarly be administered. Accordingly, it was found that a suitable suspension of material could be prepared to administer a fixed dose of ergotamine tartrate per single inhalation.[13] The remainder of this report concerns itself with the results obtained with the use of the device, calibrated to deliver 0.36 mg. of ergotamine tartrate per single inhalation.

CASE MATERIAL

Sixty-one patients from the Headache Clinic and private practice were selected as candidates for observation of the effectiveness of this method of administration. All patients were studied and worked up according to the method previously outlined.[14] No patient was included who had not previously been observed for a minimum of 6 months and whose responsiveness or lack of response to other forms of therapy had not been carefully evaluated. In this series were 41 females and 20 males, ranging in age from 16 to 72, the duration of headache being anywhere from 1 to 60 years. No patient was included who had evidence of peripheral, cerebral or coronary artery disease. Many of the patients had been previously treated with other forms of ergotamine tartrate, with varying degrees to benefit. No attempt was made to compare relative effectiveness of various routes of administration, since a multitude of factors enter into this consideration. All patients were instructed as to the proper use of the Medihaler apparatus and were advised to use the medication promptly at the beginning of the headache.

RESULTS OF TREATMENT

Table 1 summarizes our experience with ergotamine tartrate by transpulmonary administration. The criteria for response have been indicated in previous publications and are commonly accepted in reports of this nature. Satisfactory results are considered when complete relief occurs within a 2-hour period. Incomplete

TABLE 1

Treatment of Headache with Medihaler Ergotamine

Diagnosis	No. of Cases	Results			
		Excellent	Good	Fair	Poor
Vascular:					
Migraine	33	22	5	3	3
Histamine	9	6	2	0	1
Nonvascular:					
Tension	14	3	3	1	7
Post-traumatic	5	1	0	0	4
SUMMARY:					
Vascular	42	Satisfactory— 35 (83%) Unsatisfactory— 7 (17%)			
Nonvascular	19	Satisfactory— 7 (37%) Unsatisfactory—12 (63%)			

relief during this period of time or complete relief occurring in more than 2 hours is considered unsatisfactory. Twenty-seven of the 33 patients included in this group with migraine headaches showed satisfactory results. A surprisingly higher result of effective response was seen in 8 of the 9 patients with histaminic cephalalgia. This result is attributed to the advice given to the patient that the medicine, to be effective, must be taken promptly upon the onset of the headache. If the patient with this condition had headache for more than 30 minutes or was awakened from sleep with intense pain he was advised not to use the apparatus, since the result would be anticipated to be unhelpful. A number of patients are likewise evaluated whose headaches were thought to be on a nonvascular mechanism, and the results in tension headaches were decidedly less impressive and in the post-traumatic group almost entirely negative.

In table 2 are listed the side-effects observed.

TABLE 2
Medihaler Ergotamine: Side-effects
61 Patients

	No. Patients
Nausea	10
Bad taste	5
Dizziness	2
Miscellaneous:	
Gagging (1) Watering of eyes (1)	2

Fortunately no patients were observed who complained of vomiting, although nausea occurred in one-sixth of the patients. The unavoidable contamination of the oral cavity with the nebulized material accounted for the fact that almost all patients would taste the medication, and this precluded the use of elaborate double-blind studies as a means for evaluating this agent. The taste was found to be objectionable, however, in only 5 patients. Trial runs with inert materials propelled by the Medihaler apparatus produced neither undesirable taste nor therapeutic effectiveness and were therefore abandoned. Of considerable interest was the report of the speed on onset of relief, as expressed in table 3. Of the 30 patients able to give exact indications of effective relief, approximately two-thirds indicated that the onset of relief occurred within a 15-minute period. This is entirely comparable to the intravenous administration of dihydroergotamine within our experience and represents an improvement over conventional oral administration of ergotamine tartrate.

TABLE 3
Medihaler Ergotamine: Speed of Onset of Relief

Minutes	No. of Patients
Less than 15	19
15–30	4
30–60	2
60+	5
Not specified	12
Total satisfactory	42

In table 4 is shown the number of inhalations required to produce complete effect. Since the largest number of patients obtained the anticipated result with 1 to 3 inhalations, it is apparent that the dose schedule by transpulmonary absorption ranges from 0.36 mg. to 1.08 mg. of ergotamine tartrate. This compares favorably with the conventional oral and rectal dosage of from 2 to 6 mg. of ergotamine tartrate, as we have found in our experience.

TABLE 4
Medihaler Ergotamine: Inhalations Required

No. Inhalations	No. Patients
1	18
2	20
3	14
4	1
5	1
6	1
Not specified	6
	61

(*Continued on page 59*)

Some Antecedents of Mental Health with a Look Forward*

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PROBABLY ALL CAN AGREE at the outset that any effort to see very far into the future will defy the best efforts of most. This paper is an attempt to summarize our present condition and to consider the forms for development which lie just immediately ahead in mental health. To do this, a review of the background and history of developments contributing to mental health must be made.

Before undertaking this, a few observations are in order with respect to professional attitudes which sometimes retard acceptance of responsibility by official agencies of mental health programs. Some of our colleagues, experienced and knowledgeable in the fields of public health or psychiatry, may be heard to express amazement at the amount of popular interest in, and public concern about, the related areas of mental health and mental illness. A few have decided that what is being witnessed is a transitory phenomenon which will soon pass away; others retreat behind a screen of assurances erected to permit only the view that this is a cleverly staged agitation to advance the self-interest of one or another group of professionals. Rationalized disbelief in the genuineness of this as a contemporary health issue cannot be supported, when tested against a century of events in European and American medicine and public health.

There are others who, while sympathetic to needs for program development in connection with mental health and illness, withhold full support because there is no precise definition of "mental health." Defining "mental illness" presents substantial difficulties, but these are nothing compared to the confusion which obtains when the attempt is made to construct a consensus on the definition of "mental health." Although I do not intend to offer a new definition nor to review all the current ones, I believe it will behoove us to try to understand something of the origin of the confusion which exists. Perhaps then will be removed some resistance to mental health as an operational responsibility for organized health services.

Events of a period extending back a little more than a century are pertinent for review. Public health is often considered to have had its modern origin about 105 years ago when John Snow recommended removal of the handle of the Broad Street pump to curb an epidemic of cholera in London. This dramatic event was the outcome of a series of careful studies which helped to usher in the "Great Sanitary Awakening."[1, 2] Mental health as a conceptual approach to problems of living is about of the same age, although in the older literature "mental hygiene" is the expression usually encountered.

Until relatively recently public health and mental health have run separate courses in their respective developments, although of late the two fields have been converging. The courses followed were not at all parallel. At the time that "mental hygiene" was growing in concept, public health was becoming increasingly well organized in order to bend its greatest efforts in fields of importance to the community not directly related to mental illness. This historic difference between public health and mental health cannot be overemphasized; lacking the needed organization, mental health in the twentieth century is still in search of great achievements while public health looks to new fields of endeavor.

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* Presented at the Annual Meeting of the Public Health Association of New York City in New York, May 23, 1960.

Lemkau has pointed to the characteristic lack of personnel for other than direct patient care as an impediment to development of planning coördination and administration of mental health services.[3] Lacking sufficient operational models and program guidelines within the psychiatric tradition, mental health will have to draw upon other sources for some of these. If mental health is considered to be basically related to contemporary public health, models and guidelines which are a part of the public health background may be utilized in order to project mental health developments into the future. To do this, a brief review is in order concerning the meaning in our times of the term "public health."

Governmental Responsibility and Administration

Leonard A. Scheele, former Surgeon General of the U. S. Public Health Service, once defined public health as the "administration by governments of regulatory laws, services, and facilities designed to protect and improve the health of the civilian population."[4] The emphasis in his definition is upon the governmental administration necessary for the conduct of official actions in behalf of the community. A clear guideline for mental health is the assumption of responsibility by an agency of government for the health of the people.

Of some relevance to this guideline is the observation that this principle brings public health into contiguity, and sometimes competition, with other governmental, and sometimes with nongovernmental, agencies. Two or more agencies may be engaged in work aimed at the well-being of some part of the population. A fair statement of the situation must admit that responsibility for the health of the population has not been clearly established among the various health and other agencies. Mental health promises to present similar issues which will need to be identified and resolved with experience.

Empirical Knowledge as the First Basis for Advance

A second guideline may be perceived by a review of accomplishments in the field of public health since John Snow's historic studies of cholera. These are really astonishing, if for no other reason than that in a single century diseases have been curbed which had plagued mankind for many centuries. Many of these achievements were not based on scientific medicine; indeed, the earliest were predicated upon no more than the empirical observation that filth was associated with disease. The rationale of public health in the early years is tersely summarized as "anti-filth"—the sanitation of physical environment.[5] Directed against the realities of those early years, against the conditions of dirty, infested slums and their overcrowded and underprotected inhabitants, public health had a mission which was appropriate to the times and needed by the population. From the earliest time, therefore, public health developed by means of a series of *ad hoc* improvisations based upon empirical knowledge. This is a guideline which must not be forgotten by workers in mental health, as Abel Wolman, Professor of Sanitary Engineering at Johns Hopkins, has eloquently emphasized.[6]

Scientific Discovery as an Influence on Mission

The accumulation of scientific knowledge offered another obvious guideline. This allowed public health to become increasingly effective in its measures to alter hazards from the physical environment. Some knowledge was directed against specific hazardous elements in the environment, as with the introduction, through bacteriology, of immunization. Other data allowed for control of a category of diseases of the like of scurvy and pellagra. As a result of these developments, concern for the health of the child was converted into programs which emphasized immunizations and proper diet as keystones to child health. In more recent times the successful introduction of penicillin, sulfanilamide and other antibiotics of chemotherapeutic agents dealt a dramatically telling blow against many communicable diseases. As a consequence, public health, organized to meet the needs of a population exposed to the hazard of transmissible diseases, faced a realignment of mission. One consequence of this was to consider mental health as an attainable objective.

The succession of achievements against the microbial and nutritional diseases was a factor which freed public health interests for application in other fields. Preoccupation with acute diseases thus gave way to concern about chronic diseases. Emphasis on health problems of children became balanced by recognition of special problems of the aging population as well; sanitation technologies and environmental health were joined by the methodologies of the social sciences and mental hygiene. A similar realignment of mission may be forming in the psychiatric field as a result of the discovery of new psychopharmacologic agents. Gruenberg[7] considers this and the changing concepts of care of the psychotic patient to comprise "the great advance in psychiatry of our lifetime."

Impact of the Lengthening Life Span

The whole range of public health has been increased by recent medical events. Chronic diseases, geriatric problems, and social pathology have pedigrees as long in human experience as do acute diseases, pediatric problems and problems of physical sanitation. Yet our generation may be the first to have the opportunity to work extensively on problems over the entire range. This allows us to add another guideline. Mental health problems and programs will be expected to be developed along the entire axis of the life of man, which now demands a level of concern for the aged comparable to that which before has existed for children and youth.

The realignment of public health responsibilities in terms of optimum health is also a function of response to contemporary needs. The statement, written over 100 years ago by Lemuel Shattuck[8] in his significant pioneering work, still reads well today: "The condition of perfect public health requires such laws and regulations as will secure to man associated in society the same sanitary enjoyments that he would have as an isolated individual; and as will protect him from injury from any influences connected with his locality, his dwelling house, his occupation, or those of his associates or neighbors, or from any other social causes." Shattuck's report identifies public health as operating to safeguard man from inroads of adverse social forces at play upon him, which is a broad enough charter to include mental illness and health throughout his entire life span.

Population Hazard and Systematized Action

When shall a health problem become a public responsibility? One guideline is furnished by the answer, "When, because of its nature or extent, it may be solved only by systematized social action."[9] Needless to say, the systematized action needed to resolve a health problem will require appropriate organization and operations. In addition, health problems have "relative importance varying with the hazard to the population exposed."[10] This has been influential in shaping the course of public health all during the past century, albeit of different character at different times.

Each generation has had problems bequeathed which, although identified to some extent by the preceding generation, had not yet been resolved. Thus, a legacy of partially solved health issues has been inherited by each generation. Another heritage—that of accumulated wisdom based upon experiences, both successful and unsuccessful, in the effort to solve health problems—has enabled each generation to view the old problems to better advantage and to identify new problems when older ones were eliminated as major threats.

ORIGINS OF MENTAL HEALTH

A consideration of "mental health" in ordinary usage discloses that the term is actually used to express related but quite distinct ideas. This is no accident but the product of medical concepts which emerged in this country a little over a hundred years ago. A review of these developments in connection with historic developments in public health will be useful. By referring to the developments in the various shades of meaning behind the term mental health we find some guidance as to types of programs which may be expected.

In 1843 William Sweetser introduced the term "mental hygiene" into use in this country. His original usage was intended to convey an approach to the patient somewhat analogous to the current concept of psychosomatic medicine or comprehensive medicine. This was a reiteration of a very old concept in medicine, namely, that one needs to know the man in whom the disease resides in order to know the effects of each on the other. Next, George Cook, in 1859, used the term to embody the problems attendant on the promotion of mental health and the prevention of mental disease. In addition, Cook emphasized the importance of observations that the inception of mental disease was in childhood; he also singled out the family unit as the proper focus for mental hygiene measures. During the Civil War Isaac Ray issued a book in which he defined mental hygiene as "the art of preserving the health of the mind." Ray's presentation was one which attempted to give the individual a kind of prophylactic guidance. In 1876 the concept was expanded by John P. Gray to include sociologic and social science studies, relating these to mental hygiene.[11]

Thus, before the outbreak of the Civil War, the term "mental hygiene" had been used for two quite different purposes: (1) to define an approach toward the understanding of the etiology of an individual's illness in terms of the whole person (Sweetser) and (2) to indicate the practice of instituting measures in the family setting before illness affected an individual of that unit (Cook). Interest in mental hygiene continued, and by 1880 two other usages had been introduced: (3) a formula for individual living (Ray) and (4) an approach to prevention of mental disease by the study of social problems and action taken at community level (Gray).

Having reviewed the origin of "mental hygiene" as an expression, we may begin to realize why our contemporary derivative, "mental health," may be a term subject to misunderstanding. We can visualize 4 persons being engaged in a discussion of mental health and yet talking about 4 different understandings, however basically they might be related.

If we translate these older views into modern terms, we discern the forerunners of certain principles in current use: the integration of psychiatric services into general medical services, the importance of considering the emotional aspects of disease, the need for early diagnosis and treatment in childhood with an appreciation of the importance of the family in treatment, the desirability of trying to educate for mental health, and the multidisciplinary attack necessary to overcoming obstacles to community mental health.

MENTAL HEALTH CONSULTATION

One contemporary program type may be considered to be derived from William Sweetser's concept of mental hygiene. He aimed to make better the practice of medicine by enlarging the awareness of the physician to include not only the symptom, or the disease, but the whole patient. Today a great host of workers need to be provided the opportunity to apply available contemporary knowledge in their work whether with patients or with clients, whether school children, probationers, industrial workers, or whatever. A mental health program will aim toward helping these professional workers to perform more effectively by extending the awareness of the worker beyond the whole person. Now called mental health consultation, this program is one in which the helping person is assisted toward better use of himself in behalf of the helped person. Quite obviously, this program, which directs attention toward more effective use of a helping person, will find application in relation to a number of types of workers: physicians, nurses, principals, teachers, counselors, social workers, probation officers and judges.

Gerald Caplan[12] has written of his experiences in developing mental health consultation in schools. He has described two main categories: "The first aims at enlarging educators' knowledge of the psychologic needs of a child and of professional technics and organizational methods for dealing with them. The second aims at improving educators' use of the self in the professional context, so that their personality strengths may be more effectively mobilized for the mental health of their pupils, and so that their unsolved emotional problems may not interfere with the utilization of their existing professional knowledge and skills." The first type, called "case-centered consultation," is a direct descendant of Sweetser's concept, but the second type, known as "problem-centered consultation," is of a somewhat different order.

While the terminology employed was different, credit goes to the United States Army for developing a similar program of services in connection with training centers during World War II.[13] Out of the Army's mental hygiene consultation services grew an activity unique in military psychiatry. Known as the advisory function, this new military psychiatric service differentiated the training center psychiatry of World War II from earlier organized psychiatric efforts. Platoon leaders and sergeants became known as the first echelon of mental health. In similar vein Caplan calls teachers and other helping persons "gatekeepers of mental health"; others speak of "caretakers" or key individuals. A diversified program for mental health must seek to provide mental health consultation to these important persons.

Direct Patient Service:
Child Guidance Model

The second program type was suggested in the works of George Cook. He underscored the importance of childhood in the unfolding of psychosis, pointing out the need to apply measures early in the family as a unit. The importance of parent-child relationships and their modifiability in the interest of health demands our attention in planning. The child guidance clinics of this nation have been working along these lines for a number of years. New developments are urgently needed to increase the usefulness and effectiveness of these units.

Mental Health Education

The third of our program types comes to us from Ray's effort to impart useful information in the interest of individual health. While the effectiveness of health education remains a difficult problem in evaluation, there is much to demand continued efforts in this regard. Certainly requests will continue for information to be made available through a variety of media for consumption in classroom, meetings of educators, parents' groups, citizens concerned with such special categories as alcoholism, addiction, retardation, and the aged.

Research in Mental Health and Illness

The fourth program type was forecast by Gray, whose understanding of the necessity for engagement of social scientists in the examination of mental health problems added the research dimension. This may take a variety of forms.

More must be learned of the institutional contribution to mental health problems of its clients, whether prison, hospital or school. Concerning the last, the epidemiology of behavior disorders in junior high schools should be studied and compared with similar disorders seen in high schools and grade schools. In the continuum of patient experience we need to know not only the number of persons admitted or discharged from our hospitals and not only the diagnosis given for the condition but how long patients of each class remain in the hospital, what disposition is made, and what happens after the return of patients to the community. In like manner we need to know what children must be excluded from regular school, the diagnosis made, and the course of events in the community after their removal from regular school work.

Although the recording and analysis of health data are an accepted public health role, in many cases this has been largely operative in the collecting and analyzing of vital statistics. To date, collecting various kinds of statistics pertaining to morbidity due to mental illness has been given slight consideration. This is somewhat less so for adults than for the school-age child because of the data compiled by mental hospitals. However, for all, proper ways must be devised for collecting statistics needed to measure the extent of illness, the extent of disability, the extent of economic loss, and the extent of death due to mental conditions.

There is ample evidence that research in the etiology of mental illnesses will not be simple. Today we seem well advised to regard these disorders as of multiple and complex origin. Yet a word of caution is in order. One hundred years ago in Philadelphia, the center of medical learning of that day in this country, almost any scholarly review of the evidence for a "specific agent of disease" would lead to the conclusion that there was very little to be said for such a concept. Such authorities as Virchow and Magendie would be cited in support of the case against specific cause for disease. It is eloquent testimony to the impact upon entrenched medical thought by such men as Koch and Pasteur that the concept of specificity of etiologic agents at last was accepted. A medical historian, Erwin H. Ackerknecht,[14] warns against the assumption that because of some fancied moral or intellectual superiority we will not make the same kind of errors as did our forebears. The problems which will confront all research workers who try to unravel problems in mental illness and health are embraced in Charcot's terse expression: "Disease is from old and nothing about it changes. It is we who change as we learn to recognize what was formerly imperceptible."[15]

Consider the importance of the frequently observed time lag between discoveries of related nature. It was as far back as 1676 that Leeuwenhoek made his microscopic observations, but it was nearly 175 years before bacteria were identified as possible disease-producing organisms. It was in 1546 that Fracastorius formulated in original style a theory of contagious disease, yet it was not until 325 years later, in 1871, that Virchow found himself in the contagionist "camp." These are remarkable intervals between discovery and application. We see time lag effective even now as the years are spanned between Sweetser and the establishment of the mental hygiene advisory services of World War II, between Cook and the child guidance clinic establishment, between Ray and the still embryonic mental health education field, and between Gray and the fledgling community mental health programs of the last 5 years.

SUMMARY

Review of the patterns of public health development and mental hygiene concepts produces a number of guidelines to anticipate in the development of community mental health. Responsibility for the major share of the work will be with local government, though other auspices will be engaged for portions of the work. Systematic reduction of mental health problems will require adequate organization and opera-

(*Continued on page 60*)

PROCEEDINGS OF THE GEORGETOWN UNIVERSITY MEDICAL CENTER TUMOR BOARD

A CASE OF CARCINOMA OF THE URINARY BLADDER

Edited by

JOHN F. POTTER, M.D., F.A.C.S.

Assistant Professor of Surgery, Georgetown University School of Medicine

The patient is a 46-year-old white man whose illness dates back 4 years prior to this admission when he noted 2 episodes of gross, painless hematuria. On the second of these occasions the patient passed some small stones. Cystoscopy was performed at this time, and a tumor of the bladder was visualized. The histologic report was squamous-cell carcinoma of the bladder. As a consequence subtotal resection of the bladder was performed. The patient was checked by frequent cystoscopies and did well until 2 years prior to this admission when a tumor was detected in another area of the bladder. A second partial bladder resection was performed. The patient was again followed by cystoscopy, and 6 weeks ago a third tumor was noted. This lesion was removed by a transurethral resection and the specimen revealed carcinoma which deeply infiltrated the muscularis. The patient was, therefore, transferred to this Hospital for further treatment.

Upon evaluation at this Center no other significant genitourinary signs or symptoms were noted. Past history, family history and review of symptoms were essentially negative. The patient was moderately obese and in no distress. Physical and rectal examinations were normal. X-ray studies revealed no evidence of pulmonary or bony metastases. An intravenous pyelogram demonstrated normal renal shadows and function bilaterally without any ureteral dilatation. A filling defect was present in the left side of the bladder and was interpreted as infiltrating carcinoma. Cystoscopy revealed 2 freshly resected 2 cm. areas situated on the left lateral aspect of the bladder and about 2 cm. from the neck of the bladder. Serum electrolyte profile and blood urea nitrogen were normal.

The patient was taken to the operating room where a total cystectomy with subtotal prostatectomy was performed. Reconstruction of the urinary tract was accomplished by interposition of a segment of sigmoid colon between the ureters above and the apex of the prostatic capsule below. A Foley catheter was inserted through the urethra into the new sigmoid bladder. The patient tolerated the operation well and drained urine promptly through his Foley catheter. On the seventh day his catheter became plugged with mucus, and consequently drainage increased suprapubically. When the catheter was changed this suprapubic drainage subsided. The course was otherwise uneventful, and he was discharged 3 weeks postoperatively.

Dr. Tatiana Antonovych*: The tumor specimen taken prior to the total cystectomy revealed an infiltrating squamous-cell carcinoma of the bladder. The surgical specimen obtained at total cystectomy consisted of a bladder measuring 12 by 10 by 3.5 cm. The mucosa was quite trabeculated, and 2 defects of the mucosa were noted at the sites of previous surgery. A portion of seminal vesicle and ductus deferens was connected to the bladder. In addition, the terminal portions of the right and left ureters were included in the specimen. Most of the prostate was also attached to the specimen. The mucosa looked normal grossly except for the trabeculation. The wall of the bladder, however, was quite thickened, with a dense, white connective type of tissue. On microscopic examination the bladder shows normal transitional epithelium of the bladder. Nests of Brunn's cells are seen (figure 1). In several areas there is a sudden transition from the normal transitional epithelium to epithelium of the squamous type. This thickened squamous epithelium represents metaplasia. There is no increased nuclear hyperchromatism nor loss of polarity, and the metaplastic epithelium is confined to the intact basement membrane. The transitional cells are not anaplastic. In addition there are other small areas of carcinoma in situ. Again there is no invasion of the basement membrane. So in summary our diagnoses are: multiple areas of squamous metaplasia and carcinoma in situ of the bladder and squamous metaplasia of the ureters.

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* Assistant Professor of Pathology.

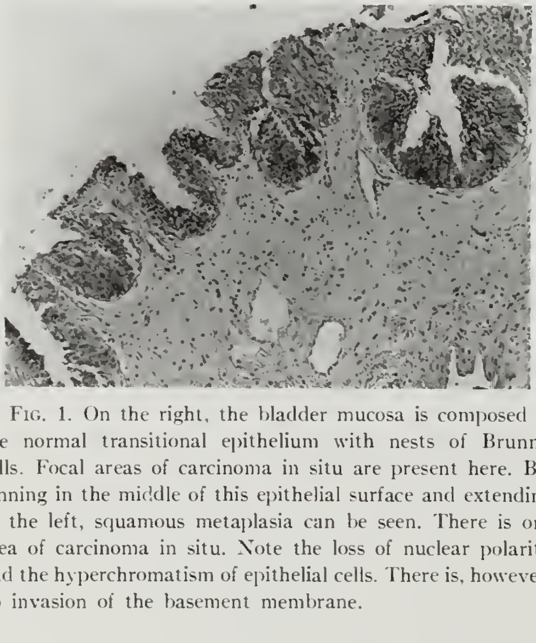

Fig. 1. On the right, the bladder mucosa is composed of the normal transitional epithelium with nests of Brunn's cells. Focal areas of carcinoma in situ are present here. Beginning in the middle of this epithelial surface and extending to the left, squamous metaplasia can be seen. There is one area of carcinoma in situ. Note the loss of nuclear polarity and the hyperchromatism of epithelial cells. There is, however, no invasion of the basement membrane.

Dr. Roger Baker†: In common with other forms of cancer relatively little is known about the etiology of carcinoma of the bladder. The increased incidence of this disease in the aniline dye industry has been well documented. These workers excrete aniline metabolites in the urine. Similarly, bladder cancer is frequently present in patients with bilharziasis. Recent investigations indicate that a high percentage of patients with bladder cancer excrete large quantities of urinary tryptophan metabolites. Some of these aromatic amines have been noted to cause bladder cancer in the laboratory mouse. All of these situations are attended by a particular type of biochemical irritation to the bladder, presumably eventuating in cancer of this organ. From a clinical standpoint, however, severe chronic cystitis has no apparent relation to subsequent development of bladder cancer. Patients with a long history of nonspecific cystitis, exudative cystitis, interstitial and tuberculous cystitis have no greater incidence of bladder cancer than the standard normal population. Most patients with bladder cancer have no previous history of chronic cystitis.

Pathologically, the great majority of cancers of the bladder are of the transitional-cell type. A lesser number are squamous-cell cancers, and finally a small percentage are adenocarcinomas, apparently arising from Brunn's cells or from the intravesical portion of the urachus.

As regards the case today, the physicians who followed this patient prior to referral here should be complimented for their skillful management. To begin with, they were quite alert to the ominous significance of hematuria, even when this hematuria was associated with the passage of urinary calculi. Calculi or calculous deposits can be found with bladder tumors, and hematuria should not be attributed to stones until the possibility of neoplasia has been excluded. A second noteworthy point is that the bleeding associated with bladder tumors may often stop spontaneously and may not recur for periods extending up to 6 months. Even 1 episode of hematuria, therefore, may have ominous significance and must be thoroughly evaluated and the possibility of a bladder or renal tumor ruled out.

In following patients who have had treatment of a bladder cancer or papilloma frequent cystoscopies at intervals of about 4 months are necessary, because the tendency of these tumors to recur is well known. Also frequent urinalyses should be obtained even in the absence of gross hematuria, since microscopic hematuria is just as significant of recurrent neoplasia as gross urinary bleeding.

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† Professor and Director of the Division of Urology.

What, then, should be the management of a patient who presents signs or symptoms suggestive of a bladder tumor? All these patients must have cystoscopy and retrograde pyelograms. Next, a transurethral resection of the bladder lesion should be performed for biopsy purposes. Management from this point will depend upon the type of lesion and its depth of infiltration. If the pathologist reports that the tumor is benign, the transurethral removal is considered sufficient. The patient must have regular cystoscopic examinations, however, since a solitary bladder papilloma recurs in about 35 per cent of cases and multiple papillomas in about 75 per cent. Some of these recurrences may be malignant.

If the specimen removed transurethrally shows carcinoma, a partial subtotal or total cystectomy is indicated. Transurethral resection does not appear to be rational treatment for a proven carcinoma of the bladder. The thickness of the normal bladder is about 5 mm. Treatment by transurethral resection implies excising only a millimeter or so beneath the cancer and this only under the most ideal circumstances. To cut deeper would cause perforation of the bladder and urinary extravasation. Consequently, an adequate margin of normal bladder beneath the tumor cannot be obtained routinely and reliably with the resectoscope. This is not good cancer surgery by any standard. This objection to the procedure has been well demonstrated in our study of total bladder specimens excised for carcinoma. Total section of these bladder specimens has revealed that in a small percentage of cases foci of cancer cells may be found in either the adjacent vesical lymphatics or in the adjacent perivesical fat. These small foci of cancer cells are sometimes found in either of the above locations when the base of the previously transurethrally resected tumor site has been microscopically free of neoplasia. In addition, from a statistical standpoint, transurethral resection of bladder tumors has questionable merit. Even with lesions of the most favorable type, i.e., cancers of low grade and low stage, 1 patient out of 5 will die of bladder cancer.

How extensive, then, should the procedure be when proven carcinoma is present? Partial, hemi- or subtotal cystectomy is applicable to the majority of bladder cancers. In this procedure a full thickness segment of the bladder wall containing the tumor and a surrounding wide area of normal bladder, perivesical fat and attached peritoneum is obtained. This procedure is applicable regardless of the location of the lesion in the bladder. Closure of the bladder is then performed and ureter or ureters reanastomosed to the bladder if it has been necessary to sacrifice ureteral orifices. The patient, of course, voids per urethra with normal urinary control.

There are occasions, however, in which total cystectomy with some type of bladder substitution is necessary. Total cystectomy is indicated in those patients who have multifocal carcinoma of the bladder, as illustrated by the patient presented today. His carcinomas were located on the left side, then on the right side and dome of the bladder. These carcinomas were separated by an interval of 1 or 2 years in each case. This patient has an intrinsic predisposition to the development of urothelial cancer. Obviously, the only suitable treatment in such cases is total removal of the bladder. A second indication for total cystectomy is carcinoma at the bladder neck, since this site is particularly dangerous because lesions in this vicinity can extend down into the prostatic capsule and then into the venous system. It has been found by experience that only a wide removal of all tissues in this area can effect a cure. Possibly a third indication for total cystectomy would be the existence of a tumor that was too extensive for removal by a partial procedure. This procedure is classified as palliative by current standards.

It is apparent that with total removal of the bladder some type of reconstruction of the urinary tract is necessary. There have been any number of these reconstructive procedures. Among these are included cutaneous ureterostomies, implantation of the ureters into the sigmoid, implantation of ureters into a colostomy, the so-called wet colostomy, or anastomosis of the ureters to the distal sigmoid which has been defunctionalized proximally by the creation of a colostomy. More recently, the problem has been managed in some quarters by the creation of an ileal bladder, connecting the ureters to an isolated ileal loop, which is brought to the skin.

All of these procedures have certain disadvantages. Among these are included abdominal drainage of urine, ascending urinary tract infection, stenosis of ureterostomies with the production of hydronephrosis, and finally the possibility of the production of hyperchloremic acidosis. Therefore, we favor the procedure employed in the case presented today, that of bladder substitution with a segment of sigmoid colon. Technically, this is accomplished after the bladder has been removed by isolating a segment of sigmoid colon, or ileum if desired, with an intact mesenteric vascular supply. The ureters are re-anastomosed to the proximal portion of the isolated intestinal loop, and the distal portion of this loop is sutured to the prostatic capsule or to the urethra. Thus, a urinary conduit has been reëstablished. In this procedure the external sphincter is spared and the patient's continence is preserved. A Foley catheter is placed into the new intestinal bladder through the urethra and drains are placed suprapubically. These patients will drain urine suprapubically for a few days or a week.

Usually, from exposure to urine, there is stimulation of mucous production from the epithelium of the intestinal bladder, but this excessive mucous production subsides in 2 to 4 weeks. In dogs having this procedure and followed for a period of 2 years this rectal bladder shows a new lining epithelium with both transitional epithelium and nonfunctioning glandular cells.

In our hands this procedure of sigmoid bladder creation has been quite satisfactory. First of all, the patients are continent and are spared the inconvenience and problems associated with external drainage of urine. The incidence of ascending pyelonephritis has not been high, running about 15 per cent. The sigmoid apparently has less capacity than other segments of bowel, such as the ileum, for the reabsorption of chlorides and, therefore, the problem of hyperchloremic acidosis has not been noted. The incidence of hydro-ureter and hydronephrosis is approximately that seen after any type of bilateral ureteral anastomoses. In the cystogram a satisfactory bladder of good capacity is demonstrated, as can be seen in the X-ray film of this patient (figure 2).

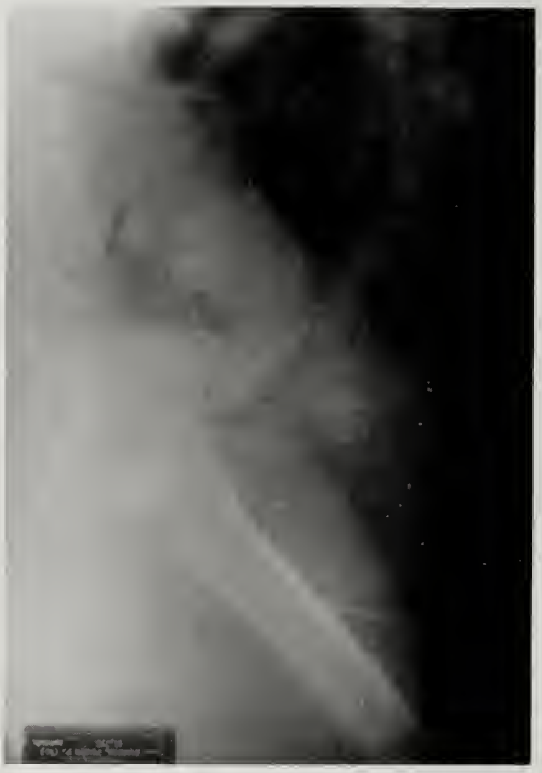


FIG. 2. Cystogram revealing a sigmoid bladder of adequate capacity.

(*Continued on page 60*)

The Doctor as a Scholar

EDWARD PODOLSKY, M.D.
Brooklyn, New York

To PURE SCHOLARSHIP the contributions of medical men, from time immemorial, have been of the highest order. Together with the doctor of divinity, the doctor of medicine helped to keep the flame of learning alive during the dismal centuries of the Middle Ages. In the eras that followed physicians were instrumental in making many significant contributions to many branches of pure scholarship.

Among the first of the significant medical scholars of recent centuries was Thomas Linacre, who lived from 1460 to 1524. He began his education at Oxford University and continued it in the ancient University of Padua in Italy, from which he received his degree in medicine. Upon his return to England he distinguished himself as a physician, and when Henry VIII became King, Linacre was appointed as one of his physicians. Dr. Linacre enjoyed a large medical practice in London and numbered many prominent persons as his patients. However, medicine was only one of his many interests. He was also very much attracted to religion, and after a course of intense preparation he received his priest's orders. Following this he restricted his medical work and devoted more of his time to scholarship. He was the founder of the College of Physicians, which was incorporated in 1518. Linacre was its first president; he retained this office until his death. He aided the universities of Oxford and Cambridge in scholarly research as well as in monetary gifts.

A contemporary of Linacre was John Caius (1510–1573), who was born at Norwich and studied at Conville Hall, Cambridge. Like Linacre he went to Padua to round out his education. Here he came into contact with the leading medical men of the day, among them Montanus in medicine and Vesalius in anatomy. He became a very close friend of the anatomist, who lived in his house for 8 months.

His career seemed to parallel that of Linacre's with remarkable fidelity. Upon his return to England he became physician to Edward V and later to Queen Mary. His practice was enormous, and he became wealthy. He never married and for this reason determined to devote his wealth to the encouragement of scholarship. In 1557 he obtained royal permission to finance Conville Hall, his alma mater, and the institution became known as Caius College, which name it retains to this day. Two years before his death he was elected president of the College of Physicians for the ninth time. He carried on the glorious traditions of his illustrious predecessor and founder of the college, Thomas Linacre.

In the year 1559 Dr. Caius was persuaded to accept the Mastership of the College, made vacant by the death of Thomas Bacon. Henry VIII had effected a separation of England from the Catholic Church, but there were many who still adhered to the Pope. Dr. Caius was suspected of being one of these and for this reason was not very popular with the Fellows of the College.

The Massacre of St. Bartholomew aroused great indignation all over England against those with Catholic leanings, and a raid was made on Caius's house, where a collection of ornaments used in Catholic rituals was discovered. Caius's life thereafter was far from peaceful. In spite of all this, he had contributed a great deal to the learning of that period, particularly to natural history.

Among the earlier of the classical scholars was Richard Mead (1673–1754), who studied classical literature and antiques at the University of Utrecht and later medicine at the University of Leyden, where a countryman, Archibald Pitcairne, was Professor of Physic. Upon receiving his medical degree Mead returned to England, where he practiced at Stepney and became physician to the world-famous St. Thomas Hospital. Dr. Mead was an accomplished classical scholar, and in spite of his enormous practice found time to encourage classical studies and helped in more practical ways by constantly presenting large sums of money to promote classical scholarship.

A medical man who attained great prominence as a Greek scholar was Francis Adams (1798–1861). He was born at Lumphanan, in Scotland. He was graduated in arts and studied medicine at Aberdeen. Then he went to London, where he received his M.R.C.S. After graduation he settled down at Banchory, where he spent the rest of his life. Dr. Adams was very much interested in pure classical scholarship and translated many of the Greek writings into English. He was among the first of the doctor-scholars to render into English the works of the Greek physicians, Hippocrates, Paulus Aegineta and Aretaeus. His fame as a classical scholar attracted attention and he was offered the chair of Greek in his own university. His love for medicine was so great that he could not bear the thought of giving up medical practice, and for this reason he refused the offer.

John Freind (1675–1728) was another physician who attracted wide attention by his fine classical scholarship. He received his academic and medical education at Oxford University. In 1704 he lectured on chemistry at his University, and in the following year he went to Spain as physician to the British forces. In 1712 he became a Fellow of the Royal Society and 10 years later became a Member of Parliament for Launceston.

Soon after he became implicated in Bishop Atterbury's plot for the restoration of the Stuart family and was committed to the Tower of London in 1723 on a charge of high treason. Here he remained for 3 months, devoting his time to studies in Latin. It is said that he owed his freedom from the Tower to Dr. Mead, who, when summoned to attend Sir Robert Walpole, refused to prescribe for him until he promised to set Dr. Freind free.

Among the earliest contributions to literary scholarship were those made by Robert Watt (1774–1819). He was born on a farm near Stewarton in Ayrshire and was graduated in arts at Glasgow. For a while he acted as a parochial schoolmaster, but he was much more interested in medicine, and for this reason returned to Glasgow to enter upon his medical studies. In 1799 he became a Licentiate of the Faculty of Physicians and Surgeons. In the same year he began general practice in Paisley, where he remained for 11 years. In 1810 he obtained his M.D. degree.

Dr. Watt was a promoter and first President of the Glasgow Medical Society. In 1816 he was elected President of the Glasgow Philosophical Society, and in the following year his health became so impaired that he withdrew from medical practice. He then left Glasgow and moved to Campvale, where he entered upon his studies in literature. Here he conceived his great work, the Bibliotheca Britannica. His health grew steadily worse, and he died in 1819 with the Bibliotheca practically completed.

Dr. Watt's great achievement, the Bibliotheca Britannica, or a General Index to British and Foreign Literature, was completed 5 years after his death. It was a monumental achievement for one man, being the first bibliographic work of modern times. It consists of 4 quarto volumes. The first 2 contain the names of more than 40,000 authors, with brief summaries of their works. The second part contains all the books mentioned in the first part, arranged under subjects.

Another doctor who contributed much to

literary scholarship was Peter Mark Roget (1779–1869), the son of a French pastor in London. He was graduated in medicine at the University of Edinburgh at the early age of 19, but he continued his studies in London. In the year 1805 Dr. Roget was appointed a physician to the Manchester Infirmary, and in this capacity he also became one of the founders of the Manchester Medical School. Three years later he moved to London, where he engaged not only in a very active medical practice but in other activities as well.

In between office consultations and calls at his patients' homes Dr. Roget made a very thorough investigation of the water supply of the metropolis at the request of the government. He also invented a logarithmic slide rule which won him election to the Royal Society. In time he succeeded Sir John Herschel as Secretary of this Society. During this time he also wrote a Bridgewater treatise on "Animal and Vegetable Physiology Considered with Reference to Natural Theology." This work attained great popularity and went through many editions. Dr. Roget was also a founder of the University of London.

The general public, however, remembers Dr. Roget not for the many accomplishments during his lifetime but for one single literary production. This is the world-famous "Roget's Thesaurus of English Words and Phrases." He wrote this book after 1840, when he retired from professional practice to devote himself to this work exclusively. Roget's Thesaurus went through 28 editions during his lifetime, and there have been innumerable editions since. It has been a steady seller and is still as popular as ever. There is not a writer or editor of English anywhere in the world who has not heard of this work or who does not have a copy on his desk.

William Alexander Greenhull (1814–1894) was another medical man who attained great eminence as a scholar. He was born in London and received his medical education at the universities of Oxford and Paris. He set up in medical practice at Oxford and devoted his spare time to the study of Greek and Arabic. Among his numerous contributions to classical scholarship were a Greek and a Latin edition of the "Physiology of Theophilus," a Latin edition of Sydenham's works, and an English translation of the works of Rhazes from the Arabic. Greenhull also contributed many articles to Smith's "Dictionaries of Greek and Roman Antiquities and Biography."

Sir Hans Sloane (1660–1753) is well known as both a scholar and a physician. He was born in County Down and studied in Paris and Montpellier. In 1687 he went as a physician to the West Indies and in time became the personal physician to the Governor of Jamaica. While in the West Indies he undertook a systematic study of the flora and fauna of that part of the world, collecting many specimens which he brought back to England. Dr. Sloane was very generous in his bequests to the needy. Throughout his life Sir Hans was a tireless collector of valuable specimens of natural history, and after his death his famous collection was used in starting the British Museum, which was opened to the public in 1759.

One of the most famous of modern Orientalists was a medical man, Edward Granville Browne (1862–1926). He studied medicine at the University of Cambridge, from which he received his M.B. degree. Later he was elected F.R.C.P., but he never practiced medicine. He was far more interested in oriental studies than he was in medicine. He had a thorough knowledge, particularly of Persian and Arabic. He returned to his University in a teaching capacity, but not in medicine. He became Lecturer in Persian and held this position with distinction for many years. In 1902 he was appointed Sir Thomas Adams Professor of Arabic at Cambridge University.

Dr. Francois Quesnay was one of the most original thinkers on questions of economics, and his influence on such men as Malthus, Paley, Pitt, Peal, Franklin, Gladstone and others made itself felt in the world for a great many years. Francois Quesnay was born at Mere, not far from Paris, in 1694. After obtaining his Master of Arts degree at the University of Paris he began the study of medicine and in 1744 obtained his Doctor of Medicine degree.

Dr. Quesnay had a distinguished medical career. He became medical attendant of the family of the powerful Duke de Retz, surgeon of the Paris Police Department in 1736, Royal Professor of Materia Medica and Surgery in 1738, and Commissioner of War in 1739.

But it was in economics that Quesnay distinguished himself. He was the founder of physiocracy, which was a system of thought based upon a belief in the existence of natural laws which must be followed if men are to gain the highest well-being. Quesnay laid great stress on agriculture and mining. These, he believed, were the sole means of increasing the wealth of a nation; nature by her bounty created a surplus. This was a vital point in Quesnay's system. He considered that industry was productive only in that it increased the wealth of the nation by making more goods than were consumed in the process.

Quesnay's system emphasized individualism and freedom. Private property was considered the expression of individuality with the individual free to dispose of it.

Quesnay's economic theories exerted a profound influence. They improved agriculture and increased the importance of the oppressed peasants. They freed trade, especially in breadstuffs. They influenced the Constitutional Assembly in the early days of the French Revolution. Quesnay's physiocrats exerted a tremendous influence in France and England and other countries. At his death in 1774 Quesnay had attained a reputation as the foremost economic thinker of his day.

These, then, have been a few of the physicians who attained great eminence in scholarship unrelated to medicine. There have been a great many others; the list is far too great to include in a single article.

PRESIDENT'S PAGE

WE FACE THE CHALLENGE

I CANNOT JOIN my 93 distinguished predecessors in the high office of President of this Society without keen awareness that it is such leadership as theirs which turns otherwise aimless individual wanderings into organized attitudes and actions. These men are not just shadowy ghosts of a dead past. I have known and respected more than a third of them all. Many have been, and are, among my dearest friends.

Cradled in the wisdom of these leaders, the youngest and least experienced among us may take strength to learn the meaning and the good response to the kaleidoscopic furor of change which seems to hurl us into the unknown. To avoid the mistakes of history, we must know history. When we think specifically of the doings of men, we must think of a Man. In assuming the dedications of this presidency I think appreciatively of the presidents who have brought our Society to the present.

As perhaps the happiest augury of my administration, I think of the near unanimity with which our members supported the successful drive only a few weeks ago to have the AMA assume a positive leadership in consolidating the forces of volition behind nonprofit prepayment on behalf of all our people.

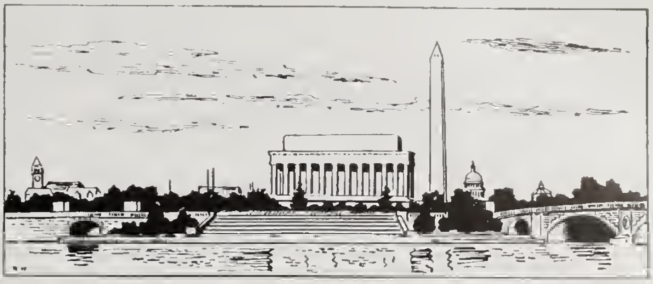
While this act was notably wise as public relations, the broad compassion which dictated it was in the fine tradition of the true physician.

Though I know that many hard decisions wait upon us and that their implementation will weigh heavily upon us in all the days of this year, I face them with a light heart, for I know that our members are ready to be tested.

Donald Stubbs

DONALD HARRISON STUBBS, M.D.

President, The Medical Society of the District of Columbia, 1961



EDITORIALS

DONALD HARRISON STUBBS, M.D.

When Dr. Donald Harrison Stubbs took office on January 1, 1961, he became the 94th President of the Medical Society of the District of Columbia. A son of the South, he is one of the country's leading anesthesiologists. In the past few years he has become nationally known for his vigorous and eloquent leadership in the Blue Shield movement.

Dr. Stubbs was born in Ochlocknee, Georgia, on December 25, 1905, the son of James B. and Pearl Stubbs. His early education was received in South Georgia. He later attended Central High School, Washington, D. C., from which he was graduated. He attended George Washington University, where he received his B.A. (1929) and M.A. (1931) degrees. His medical degree was received from this institution's School of Medicine in 1932. He interned at Emergency Hospital, now absorbed by the Washington Hospital Center, in Washington, D. C., 1932–33. He also took his residency in surgery at the same institution in 1933–35.

A medical educator for 32 years, he has been a member of the faculties of both George Washington and Georgetown University Schools of Medicine. Among the subjects he has taught are psychology, bacteriology, pathology, surgery, and anesthesiology. He is now Clinical Professor of Anesthesiology at George Washington University School of Medicine.

He is head of the Department of Anesthesiology at Doctors Hospital, Senior Attending Anesthesiologist at Washington Hospital Center, and consultant to the National Institutes of Health.

Many honors have come to Dr. Stubbs. He received the Award of Merit from the George Washington University Medical Society in 1956, the Certificate for Meritorious Service from the Medical Society of the District of Columbia in 1959, and the "Health-USA" Award from the Washington Board of Trade and the Medical Society of the District of Columbia in 1960.

Dr. Stubbs became President of Washington's Blue Shield Plan, Medical Service of the District of Columbia, in 1952. He had not been long in this position when his extraordinary abilities were recognized and he became Chairman of the Board of Directors of the National Association of Blue Shield Plans. He has served in this capacity for the past 2½ years.

He is a member of the National Advisory Committee to the White House Conference on Aging.

Few physicians in this country can match his effectiveness on the rostrum. He speaks easily, effectively, and eloquently. The result has been that he is in great demand as a speaker by medical organizations everywhere. Dr. Stubbs is an equally effective writer and has

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia

contributed numerous articles and editorials to various medical journals, including the Medical Annals of the District of Columbia, of which he is an Editorial Board member.

Dr. Stubbs is much admired by his friends, who see beneath his sometimes forbidding demeanor a man of deep sympathy and understanding. He is a thoughtful physician whose reading is not confined to the scientific field. He is rated by his friends as unusually well informed on cultural subjects.

Aside from the presidency of the Medical Society, Dr. Stubbs will carry a heavy burden during the coming year because of his Blue Shield connections and AMA duties, including membership on the Commission on the Costs of Medical Care. However, he is a man of tireless energy and will serve both organizations with distinction and courage. Few of his fellows are more keenly aware of the serious problems confronting the medical profession and what must be done about them.

Dr. and Mrs. Stubbs, the former Rosalee Brown, live in Alexandria, Virginia. They have four children: Peggy Ann, who, with her husband, William Silberman, are senior medical students at George Washington University School of Medicine; Kendon, who is attending the Graduate School of the University of Virginia, where he is working for his Master's degree; Alan, a junior at Washington and Lee University, Lexington, Virginia; and Edmund, who is attending St. Stephen's Episcopal School for Boys in Alexandria.

GLAUCOMA DETECTION—A PUBLIC SERVICE

In recent years physicians and the public have become increasingly aware of one of the most important of all the blinding diseases. Through various publicity media, glaucoma is now more widely recognized. However, all too often glaucoma is unrecognized and loss of vision is profound before the diagnosis is made.

Many studies confirm the fact that 2 per cent of the general public over 40 years of age have an intraocular pressure sufficiently high to destroy visual functioning, slowly but progressively. Since early evident signs and symptoms are usually lacking, and since vision lost by this process is not recoverable, the early detection of glaucoma and institution of treatment are imperative. Screening for glaucoma should be a routine part of the general physical examination. The use of a tonometer is a simple and innocuous procedure which will pay big dividends in the prevention of blindness. In addition, mass screening by various ancillary services will reach a segment of the population that might otherwise be missed.

Under the guidance of a Glaucoma Advisory Committee appointed by the Medical Society of the District of Columbia, the local chapter of the Prevention of Blindness Society has been conducting such a screening program for several years. To date, approximately 7,500 people have been put through a simple battery of tests, which consists of visual acuity testing by the Snellen chart, visual field testing by the Harrington-Flocks Screener, and intraocular tension testing with a tonometer by an ophthalmologist. The people tested have primarily been members of service clubs or employees of local businesses or government agencies. As a result of these tests, 150 cases of previously unrecognized glaucoma are now under treatment by ophthalmologists. Since most of these cases were detected early, the prognosis is good.

It is interesting to compare this rate with the detection tests for other diseases. According to estimates by the U.S. Public Health Service and the voluntary agencies concerned, chest X-rays reveal 1 case of tuberculosis per 1,000 tested, a routine smear for cancer detection reveals 4 cases per 1,000 tested, and a urine test in adults over 30 years of age reveals 7 cases of diabetes per 1,000 cases tested. In unselected adults over 40 years of age, glaucoma screening reveals 20 per 1,000 cases, while testing in relatives of glaucoma patients has revealed 45 per 1,000 tested.

In addition to the screening tests for glaucoma on unselected adults, the Prevention of Blindness Society has been screening relatives of known glaucoma patients at its offices at 1025 Vermont Avenue, N.W. At the annual meeting of the National Society for the Prevention of Blindness in Denver, Colorado, on March 31, 1960, Mrs. Helen Curtis Demary, the Executive Director of our local chapter, presented the results of the study of 727 relatives of glaucoma patients. Forty-five were referred for full ophthalmologic examination. Among these were 32 who proved to have confirmed glaucoma. The remaining persons have been indoctrinated, without undue alarm, in the necessity for periodic eye examination.

The results of this work demonstrate the worth of such a project. The medical community is indebted to this member organization of the United Givers Fund for its contributions. They deserve our sincere endorsement and coöperation.

Physicians who are unfamiliar with tonometry are urged to consult their ophthalmologist friends for information regarding the procurement of a tonometer, its proper usage, and interpretation. The combined efforts of many to detect glaucoma early will go a long way toward the preservation of one of our most priceless possessions—sight.

Dan G. Albert, M.D.

MR. EDWARD R. LOVELAND, F.A.C.P. (HON.)

Mr. Edward R. Loveland, the first Executive Secretary of the American College of Physicians, died in Philadelphia, October 14, 1960, after a lengthy illness. Mr. Loveland became Executive Secretary of the college in 1926 and retired in December, 1959, following which he continued as consultant until he had to cease working last June.

Mr. Loveland came to the College from the faculty of the University of Pennsylvania. In 1956 he became the first and only Honorary Fellow of the College not a medical man. The Constitution of the College had to be amended to bestow this honor. On April 6, 1960 he received the Alfred Stengel Memorial Award, one of the highest honors the College bestows. About the same time he was elected a member of the Alpha Omega Alpha honorary medical fraternity in recognition of his influence upon American medical education.

The Officers, Regents, and Governors of the College raised sufficient money to have a portrait painted of Mr. Loveland by Mr. Bjorn Egeli. This portrait is to remain permanently in the College's Headquarters Building at 4200 Pine Street in Philadelphia.

A committee has recently been appointed by the President of the College to suggest a fitting permanent memorial to Mr. Loveland. Mr. Loveland's influence in the College was great, and much of the development of the College to its present eminence has been due to his untiring efforts.

Fishing was Mr. Loveland's favored hobby, and several prominent Washington physicians will remember with great pleasure the fishing trips they made with him to Maine and Canada. Hunting was his second most favored extracurricular activity.

Mr. Loveland has been replaced by two persons, an Executive Director, Dr. Edward C. Rosenow, Jr., a Fellow of the College, and an Assistant Executive Director, Mr. Fred C. Dauterich, Jr.

Wallace M. Yater, M.D., F.A.C.P.
Secretary General,
American College of Physicians

THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

IN & OUT OF FOCUS

By the Observer

AMA Meets in Washington The Fourteenth Clinical Meeting of the American Medical Association, held in Washington, November 28–December 1, was successful from several points of view.

First of all, the attendance for a midyear meeting was apparently very satisfactory to AMA officials. The figures released by the Association disclose that attending were:

3,940	Physicians
692	Medical Students
3,547	Others, including Nurses, Technicians, Physicians' Wives and so on.
8,179	Total Attendance

However, attendance was not the only source of satisfaction, according to reports. A number of physicians said the meeting was characterized by a warmth and enthusiasm which set it apart from previous Clinical Meetings. Dr. E. Vincent Askey, President of the Association, said as much when he addressed Washington's International Medical Club.

All scientific meetings were held at the National Guard Armory. These were, on the whole, unusually well attended. Your Observer received calls from several physicians appearing on the program. They were highly pleased not only with the size of their audiences but with the close attention given their presentations.

Credit for the fine scientific program goes to Dr. Alfred Brigulio, Chairman of the Program Committee, and his associates. Dr. Brigulio is widely recognized for his administrative ability and his capabilities as a medical educator. These were evident in the quality and timeliness of the material presented.

ARMORY
SHERATON

The Scientific and Industrial Exhibits which were on display in the Armory attracted many hundreds daily, as did the color television program and motion pictures. Chairmen of the local committees responsible for these features were Drs. J. Ross Veal (Scientific Exhibits), Charles A. Hufnagel (Color Television), and Edward W. Nicklas (Motion Pictures).

The AMA's House of Delegates met at the Sheraton-Park Hotel. Those on hand for sessions of the House were enthusiastic about arrangements and repeatedly stated they were the best in the country. Meetings here were carried on with the usual efficiency and dispatch.

Unfortunately, the Armory was so far removed from the Sheraton-Park that many of those who were required to be present at meetings of the House and its committees were unable to get to see the exhibits or attend scientific meetings. It is hoped that this will be remedied before the AMA meets in Washington again and that an adequate auditorium suitable for convention purposes will have been built in the downtown area.

The social event of the week was a dinner for the officers of the AMA and members of the House of Delegates, which was held at the Statler-Hilton Hotel. Invited to the dinner, in addition to the delegates, were members of the Association's Councils and officers of state medical societies. This proved to be a delightful affair, fully coming up to the expectations of those who devoted so much time to planning it. Major General Howard McC. Snyder, President Eisenhower's personal physician, was the guest of honor. He was presented with a special award by Dr. Askey in the form of a silver cigarette box inscribed to him. Musical numbers were presented by the United States Army Chorus under the direction of Captain Sam Loboda. The audience was obviously delighted with the Chorus and bestowed enthusiastic applause on the organization. Your Observer has attended many such affairs; however, he cannot recall an occasion at which there was such a prolonged and enthusiastic demonstration at the conclusion of a musical program.

All in all, then, the Clinical Meeting in Washington was a genuine success.

Your Observer has only one personal comment to make. That is, the meeting should have been better publicized in advance. Our Society did its share with respect to its membership by designating the October issue of the MEDICAL ANNALS the AMA Convention Number and including in it a section devoted to the Clinical Meeting. Subsequently, postcard reminders were sent to the membership.

MAJOR GENERAL HOWARD McC. SNYDER

Acknowledges citation at AMA Delegates' Dinner

The American Medical Association contented itself with the publication of the program in *The Journal of the AMA* and mailing 35,000 leaflets to physicians in the East. This, in your Observer's opinion, was not sufficient. In addition, the AMA should have sent preliminary programs to all of its members. This would have increased the attendance substantially.

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A Victory Won

Last June in Miami the District Medical Society's delegates to the AMA, Drs. Raymond T. Holden and Ralph M. Caulk, offered a resolution in the House of Delegates calling upon the House "to prepare a concrete and positive medical care plan in keeping with the ideals of the Association for that segment of our population which has reached the age of 65 years . . ." and that this be considered "the beginning of a program which may eventually include the entire population." The resolution died quietly in the House on recommendation of the Reference Committee to which it was referred. But the Society's delegates received plenty of encouragement from their colleagues and therefore decided to press forward with a similar resolution at the next session of the House. As most of the readers of this column know, this was done with conspicuous success a few weeks ago when the House met at Washington's Sheraton-Park Hotel.

For the benefit of readers of this column who may not have followed the fortunes attending the Society's efforts to obtain the AMA's support for a national health program, the following will be of interest.

The first resolution calling upon the AMA to initiate such a program was presented by the Society's delegates at a meeting of the House in December 1945. This resolution with slight modifications by a Reference Committee instructed the Board of Trustees and the Council on Medical Service "to proceed as promptly as possible with the development of a specific national health program with emphasis on the Nation-wide organization of locally administered prepayment medical plans sponsored by Medical Societies."

Naturally there was much joy in the District's delegation over the favorable action on its proposal. However, disappointments were in the offing. Although the program proposed in the resolution was subsequently implemented to a considerable extent, it was never really fully realized. (See "In and Out of Focus," September 1960 issue of the MEDICAL ANNALS—"The AMA and Blue Shield.")

Early last spring, Dr. Raymond T. Holden, the Society's senior delegate, urged that another effort be undertaken which would direct the AMA's Board of Trustees to develop a national prepaid medical care plan. A resolution drafted by him to this effect was submitted to the Executive Board, which voted that Society members be canvassed for their views in regard to it. Of the 25 per cent of Active members who responded, 95 per cent favored its introduction in the House.

Encouraged by this support for their resolution, the Society's delegates went to Miami with confidence, but, as stated above, their efforts were not successful.

Determined to carry on, the Executive Board appointed a subcommittee, of which Dr. Holden was the chairman and Dr. Victor R. Alfaro, President of the Society, and Dr. Donald H. Stubbs, President-elect, were members. They were charged with drafting another resolution to be introduced at the next session of the House. The resolution appears on page 36.

It was not thought necessary by the Board to refer this resolution for consideration by the Society's membership because it had already endorsed it in principle when it "voted" on the previous resolution.

Before the House met in Washington, Dr. Holden was appointed Chairman of the House's Reference Committee on Insurance and Medical Service. This Committee had referred to it not only the Society's resolution but those from 2 other Societies, one from Michigan, the other from California, having a similar purpose. In addition, there was the Supplementary Report of the Board of Trustees dealing with the same subject. The Board of Trustees' Report recommended that the task of exploring "the basic idea of collaboration between national health agencies on a national scale be explored promptly and thoroughly by the AMA's Board of Trustees."

Reporting for the Reference Committee, Dr. Holden submitted a substitute resolution for the several resolutions introduced and the recommendations of the Board of Trustees and moved its adoption. The resolution follows:

"WHEREAS, It has been widely recognized that voluntary health insurance is the primary alternative to a compulsory governmental program; and

"WHEREAS, The public has shown its confidence in this voluntary system; and

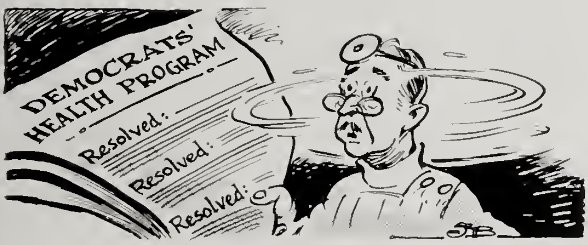
"WHEREAS, Current social, political and economic developments compel a new and revitalized effort to make voluntary health insurance successful; and

"WHEREAS, the American Medical Association has consistently pledged itself to make available the highest type of medical care; *therefore*

"*Be it resolved*, That the House of Delegates direct the Board of Trustees and the Council on Medical Service to assume immediately the leadership in consolidating the efforts of the American Medical Association with those of the National Association of Blue Shield Plans, the American Hospital Association, and the Blue Cross Association into maximum development of the voluntary nonprofit prepayment concept to provide health care for the American people; and

"*Be it further resolved*, That similar leadership be undertaken to coördinate the efforts of private insurance carriers through conferences with their national organizations; and

"*Be it further resolved*, That, where feasible, efforts be made to coöperate with representatives of other types of medical care plans, other professional groups, and representatives of industry, labor and the public at large."



A delegate from Ohio arose to move adoption of a substitute motion to the effect that recommendations contained in the Board of Trustees' Supplementary Report be accepted. This was defeated by a vote of about 2 to 1. There followed a unanimous vote for the Committee's resolution.

It will be noted that the first "resolved" in this resolution is with the exception of a word or two the same as that introduced by the Society's delegates. Thus a victory was won.

The question arises, "Does it come too late?" The answer to this lies largely with the AMA and the vigor with which it assists other national groups referred to in implementing the resolution. There is, of course, another factor of great importance. How far will the Congress and the new President go in implementing the health plank of the Democratic Party? The answer to this will soon be forthcoming.

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Dr. Askey Serves Notice

In addressing the recent session of the House of Delegates, the AMA's President, Dr. E. Vincent Askey, took full advantage of the fact that the meeting was being held in Washington. He referred to the Nation's Capital as "an outstanding medical center in our Nation" and also "the Nation's legislative fountainhead." It was at this point that he served notice that the Association would wage an unremitting fight against what it considered undesirable health legislation.

> "It is fitting," Dr. Askey stated, "that our Association is here, at this time, to make our position clear once again on certain legislative proposals dealing with the health and medical care of our citizens.
>
> "In recent years the American Medical Association has been particularly interested in developing the specifics of a sound approach to the health service and facilities needed for the aged. The Congress also has studied and debated the issue of health care insurance for the aged during recent years.
>
> "We were pleased when Congress passed and sent to the White House a voluntary, Federal-state plan of helping elderly persons who need help meet their medical and hospital costs.
>
> "Both the defeat (51–44) in the Senate of the Anderson amendment for a health care program utilizing the Social Security mechanism and the victory of the Mills-Kerr bill were a culmination of months of intensive work by the state and local medical societies and by individual physicians, by strong allies in business and industry, and by many dedicated Congressmen and Senators of both parties.
>
> "Your AMA supported to the fullest the broad proposal of Federal-state matching funds to provide care for the needy and the near-needy aged because it be-

RESOLUTION ON PREPAID MEDICAL CARE

Introduced by the Delegates from
The Medical Society of the District of Columbia
to the American Medical Association in the House of Delegates
at the Sheraton-Park Hotel in Washington on November 28, 1960

"WHEREAS, It has been widely recognized that Prepaid Medical Care is the only alternative to a Compulsory Health Program; and

"WHEREAS, Prepaid Medical Care must be made more attractive to the public through (1) the increase in services offered, (2) the widening of the scope of benefits, (3) the establishment of a Nationwide plan, and (4) by making all Plans readily understandable by both the patient and physician; and

"WHEREAS, It has been demonstrated that the public is willing to pay for good medical care and comprehensive coverage; and

"WHEREAS, The American Medical Association has consistently pledged itself to provide the highest type of medical care; *therefore*

"*Be it resolved*, That the House of Delegates direct the Board of Trustees and the Council on Medical Service to assume the leadership in consolidating the efforts of the American Medical Association with those of the National Association of Blue Shield Plans, the American Hospital Association, and the Blue Cross Association into maximum development of the prepayment concept to provide health care for the American people."

lieved the program would provide the best possible medical care for our older citizens.

"Despite the fact that this sound, far-reaching legislation was passed and was signed into law, the proponents of the Social Security approach elected to introduce the issue into the recent national political campaign. They did this even though the health care measure voted by Congress provided hundreds of millions of dollars to finance health care costs of those elderly persons who needed it.

"I am sure many of you were disquieted to learn that the electoral college majority went to the presidential candidate whose party's platform backed the Social Security approach.

"The President-elect will bring to this city and to our Nation a new administration in less than 2 months. With the executive branch of the Government in his control he undoubtedly will attempt to carry out certain promises he made in the field of medical care for the aged. He may try to do that which he could not do with supposed control of the legislative branch of the Government last August.

"As a national association of physicians dedicated to high medical principles and ethics and to democratic ideals, I can assure this new administration that the medical profession has great respect for the office of the President of the United States and shall coöperate with it whenever and wherever possible.

"However, this does not mean that the American Medical Association intends to change its basic policies merely to conform to those of the new administration or any segments of either political party.

"We shall propose and promote our views on the betterment of the public health—for all age groups—regardless of friends and foes. For us the best possible medical care and the principle of the freedom of the individual—both doctor and patient—are far more important than political expediency.

"While our profession clearly may face a hard struggle in the 87th Congress on the issue of medical aid for the aged under Social Security, there is no ground for defeatism!

"Our cause is far from lost. We know that our policy position is in the best interests of all Americans, the aged included, and our willingness to defend this policy must be strengthened and maintained.

"I remind you that medicine has many friends in both parties in Congress today. In fact, I would say that in this year's national elections we have increased that number in both the House and Senate.

"Furthermore, we can take heart in the fact that a number of legislators who strongly endorsed the Social Security approach to medical care for the aged will not be returning to Washington for the 87th session of Congress.

"Several other factors also should bolster our confidence:

1. Although an all-out drive was conducted to purge large numbers of conservative Democrats and Republicans, this campaign failed, with one or two exceptions.
2. The President-elect's margin of victory is so narrow that it would be difficult for even the most zealous adherent to consider this a mandate for a massive program of social change.
3. The results make it dramatically evident that a powerful and articulate body of conservative opinion exists in this country.

"Defeatism has no place in our ranks as we prepare to fight new versions of the kind of proposed legislation we defeated in the last session of Congress.

"Our position is right. We are together on this issue. Our allies have fought, and will fight, side by side with us. And our friends in Congress, in both parties, can be expected to battle once again to keep the sound legislation now in effect, and to maintain the principle of individual initiative, local determination, local administration, and local control."

This approach and its timing have been the subject of some discussion among District physicians. They agree that organized medicine has a legitimate interest in health legislation and should make its voice heard. However, they are also of the opinion that only a national health program acceptable to the people will insure the freedom of the profession from bureaucratic control. It is this which was emphasized in the resolution introduced by the Society's delegates at the AMA meeting in Miami last June and a similar one at the recent meeting in Washington. Encouragingly, this position was unanimously endorsed by the House of Delegates when it adopted the report of the Reference Committee on Insurance and Medical Service.

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Emergency Call Situation

In the years immediately following World War II Washington physicians doing general practice on a part or full-time basis were eager to be placed on Medical Bureau's so-called emergency call list. Physicians new to the District especially found this a helpful means of building a practice.

Times have changed. There is still not too much of a problem where day or early evening emergency calls are concerned. It is quite another matter with late evening and after midnight calls. Only a handful of physicians—even among the newcomers—wish to be listed for such calls. The majority of them, because of the location of residences, accept only those originating in Northwest Washington. There are no physicians in Southeast, Southwest, and Northeast who will regularly respond to night calls unless it is to their own patients. However, a few practitioners in the Northwest will, on occasion, go into the other areas, but their number is steadily decreasing. The Bureau has, therefore, found it necessary to either send an ambulance to patients where it is indicated or suggest that they be taken to the nearest hospital.

It had been hoped that this situation would improve, but this has not happened. Perhaps in time it will, but the Medical Bureau Committee is unanimously of the opinion that immediate action is called for. At a recent meeting it recommended to the Executive Board that as a first step the Society's Active membership be canvassed for volunteers who would respond whenever possible to emergency calls in various sections of the city, day or night. This appeal is not being confined to Medical Bureau subscribers nor to general practitioners, who, after all, should not be called upon to shoulder the entire burden.

The Bureau Committee has also recommended that physicians who for one reason or another cannot make night calls on their own patients, be asked to refer patients to alternates and not to the Bureau.

The Executive Board approved both recommendations and instructed that they be implemented at once. Before these lines appear a communication will have been received by Active members from the President of the Society requesting that they volunteer to respond in emergencies when called by Medical Bureau.

Physicians who volunteer should know that emergency calls received by the Bureau are screened by operators who have become familiar with the devious methods of narcotic addicts, alcoholics, and others who place nuisance calls. Even careful screening cannot eliminate all non-emergency calls. But this, in the Committee's opinion, is something which cannot be avoided. The important thing is that the medical profession meet its obligations by seeing to it that somehow this situation is adequately met.

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Doctors' Doctor Bills

From time to time in the past several years, members have requested the Society's Executive Board to make it possible for Active and Life members to subscribe to Washington's Blue Shield Plan, Medical Service of the District of Columbia. They have made a point of the fact that where extensive medical care is required by them or members of their families, they feel obligated to make a substantial gift to the physician who renders the service. On some occasions the cost approximates what the fee would ordinarily be, and then it is not certain that it will be of too much value to the recipient. In these circumstances they insist it is only common sense that physicians have available to them protection against medical as well as hospital costs so that physicians upon whom they call for medical services are paid at least modest fees.

Those opposed to a change in the present relationship are equally insistent that the age-old tradition that physicians care for each other and their families be observed. In fact, they say this is one of the basic tenets of the Principles of Medical Ethics. Why change a relationship which has on the whole been so satisfactory? There is ample satisfaction to the physicians who perform services for their colleagues and the dependents, they argue, and gifts in these circumstances are not a prerequisite and might well be dispensed with.

It appears that most physicians in the District of Columbia fall in the latter category. At least, canvasses of the membership have not only indicated lack of interest in protection against costs of physicians' services but no great desire to abandon the age-old reciprocal practice in the profession. For example, in 1956 the Society's Executive Board authorized a canvass of the Active and Life members to ascertain how many would favor the establishment of a group of member subscribers to Medical Service. The response was not encouraging, 220 indicating they favored the establishment of such a group and 109 opposing it. In view of the size of the Society's membership, the vote was considered insufficient and the Board decided to abandon the project for the time being.

Another canvass was made in September 1960, and as of December 5, 1960, 590 had replied, of whom 349 wished to have an opportunity to participate in a group plan. Although these returns were larger than on the previous occasion, they were not considered too encouraging. Nevertheless, the Board voted that a communication be directed to the membership together with a form on which they can indicate a desire to become subscribers to Medical Service.

If a group is to become a reality, 50 per cent, or 780, of the Active members must subscribe. Unless the response to this requirement is met, formation of a group will be postponed indefinitely.

T. W.

PROCEEDINGS OF THE ANNUAL BUSINESS MEETING

Dr. Victor R. Alfaro, President of the Medical Society of the District of Columbia, presided at the Annual Business Meeting of the Society on Wednesday evening, November 16. Present were 160 Active and Life members. The Chairman stated that since the Annual Reports of the Chairman of the Executive Board, the Secretary-Treasurer, and the Chairman of the Board of Credentials had been published in the October issue of the Medical Annals they would not be read; they were accepted by vote of the members.

Dr. Edward W. Nicklas, Chairman of the Committee on Medical Care, was called upon to read the report of his Committee, which is published following these proceedings. Dr. W. Ross Morris, Chairman of the Executive Board, read the Supplementary Report of the Board, which is also published herewith. The latter report was adopted as read with the exception of the portion which concerned the recommendations of the Committee on Medical Care with respect to the implementation of the Relative Value Scale. There followed considerable discussion on this matter and Dr. Ralph M. Caulk moved that the report of the Committee on Medical Care be adopted except for the portion relating to dollar conversion values. This was acceptable to the members.

Dr. Nicklas was nominated to membership on the Board of Trustees of Medical Service of the District of Columbia for a 3-year term, beginning with the annual meeting of the Service in April 1961.

Dr. Brooks G. Brown was appointed a member of the Board of Trustees of Group Hospitalization, Inc., representing the Society for a 5-year term, beginning with the annual meeting of GHI.

In response to a motion from the floor, members voted that a note of appreciation should go to Dr. James A. Dusbabek, retired member of the Board of Trustees of Medical Service and President the past year, for his outstanding services.

Dr. C. Willard Camalier, Jr. was called to the rostrum. The Chairman presented to him the Society's Certificate for Meritorious Service "in recognition for his devoted service to the medical profession and the people of the District of Columbia." As Chairman of the Society's Committee on Medical Care for the years 1954 through 1959, he "demonstrated unusual qualities of leadership. His thorough knowledge of socioeconomic medical problems and his statesmanlike proposals for their solution have won for him the highest praise of his colleagues."

Dr. Camalier expressed his appreciation for the award and his thanks to all committee members who had served faithfully with him.

CITATION FOR DR. CAMALIER

Dr. Willard C. Camalier, Jr. (right) receives the Certificate for Meritorious Service from Dr. Victor R. Aifaro at the Annual Business Meeting of the Medical Society of the District of Columbia, November 16.

Election of Officers

Dr. Bernard J. Walsh, Chairman of the Nominating Committee, submitted for election the following nominees for offices to serve during 1961:

President-elect: Dr. J. Spencer Dryden
First Vice President: Dr. Clarence K. Fraser
Second Vice President: Dr. Josephine E. Renshaw
Member of the Executive Board for a 4-year term: Dr. Victor R. Alfaro
Member of the Board of Credentials for a 3-year term: Dr. Duane C. Richtmeyer
Delegate to the American Medical Association for a 2-year term: Dr. Raymond T. Holden
Alternate delegate to the AMA for a 2-year term: Dr. C. Willard Camalier, Jr.

The slate as a whole was approved without further nominations.

Dr. Caulk was called upon to escort Dr. Dryden to the platform. He acknowledged the applause of the members by stating that he felt "very humble but willing to do my best to carry on in the tradition of the wonderful doctors who have held this office." Dr. Dryden will take office in January 1962.

Dr. Donald Stubbs was recognized as the incoming president; he took office on January 1 of this year.

A list of the members who had died during the past year was read by the Secretary, and the members stood for a moment in silent remembrance.

Dr. Morris was recognized again; he complimented the President on the way he had acquitted himself during his term of office, and on behalf of the Society presented him with an engraved gavel as a memento of his office. Dr. Alfaro responded graciously, stating that while the office carries many responsibilities it has many pleasant aspects.

Dr. W. Leroy Dunn, President in 1959, was called to the platform and Dr. Alfaro presented him with a framed Certificate of Appreciation for his services to the Society. Dr. Dunn stated that the certificate would be a constant reminder to him of a busy and profitable year.

There was some discussion regarding the Educational Council for Foreign Medical Graduates, led by Dr. Ernest A. Gould, who moved that the AMA be requested to reëstablish its list of Accepted Foreign Medical Schools and that ECFMG be abolished. Dr. Raymond T. Holden, senior delegate to the AMA, gave some pertinent reasons for continuing the present program of ECFMG. [See the address by AMA President Askey in this issue of the ANNALS.]

The meeting adjourned, and members gathered in the library for light refreshments.

REPORT OF COMMITTEE ON MEDICAL CARE

The Federal Employees Health Benefit Act went into effect in July of 1960. Under this plan, sponsored by the Government and partially supported by Federal funds, Federal employees and their dependents, numbering 5 million, were added to the already staggering total of 80 million people who are now eligible for the payment of all or part of their health needs through various governmental agencies. About 500,000 of these employees and dependents are located in this Metropolitan Area and represent a large proportion of your patients and mine.

Under this program the Federal Government pays approximately one-third of the monthly premium of these employees on their prepayment health insurance. Each employee was given his choice of 4 prepayment plans: first, that sponsored by Blue Cross-Blue Shield; second, that sponsored by various commercial insurance companies, of which Aetna was chosen to be the servicing agent for all of them; third, Group Health Association; and fourth, various other group or Union-sponsored plans given recognition by the Government.

Only the first 2 plans intimately concern most of us, and within these the so-called "high option" choice was exercised by about 82 per cent of the employees choosing these 2 plans. The so-called "low option" is of little significance at this time.

The Blue Cross-Blue Shield "high option" plan, as you would expect, retains service benefits for subscribers having family incomes less than $6,000 or single individuals making less than $4,000. One hundred twenty days of hospital benefits with semi-private accommodations were provided, plus full coverage of in-hospital services, drugs, etc. Surgical and anesthetic procedures were paid for under the Blue Shield Surgical-Medical Contract Schedule. Medical benefits were included at a schedule of $5 a day after payment of $15 for the first, and $10 each for the second and third days. After the patient incurs expenses over $100 in any one illness which he pays above this basic coverage, the so-called Major Medical provisions become effective.

The so-called Aetna Plan, also high option, is an indemnity plan which pays 80 per cent of all medical expenses, after an initial outlay of $50 by each patient in any one calandar year, with a maximum benefit of $30,000. In the past 10 years variations of a new type of protection against catastrophic illness have been introduced. Known as Major Medical coverage, such programs have had phenomenal growth, from 1 million subscribers to about 25 million subscribers since 1950. Such plans usually pay 80 per cent of all expenses incident to an illness, including medical and surgical fees, hospital costs, drugs, ancillary services, nursing costs, etc., to a maximum of $5,000 to $30,000, depending on the plan. There is usually a so-called "deductible" which the patient must pay himself before the Major Medical program goes into effect. This may vary from $25 to $1,000, again varying with the type of plan and, in some cases, on the income of the patient. The patient thus "co-insures" himself by paying the remaining 20 per cent of his medical bill himself. In many cases, the deductible item may be met in large part by the payment of basic coverage costs by the insuring company.

This Major Medical protection is offered to Federal employees as a supplemental benefit by Blue Cross-Blue Shield, and its principles apply to the Aetna program in its entirety. Now it is most important for you to note this: While Blue Shield will pay its basic coverage according to the Surgical-Medical fee schedule, the supplemental portion of the Blue Shield programs limits the liability of the carrier for physicians' services to 80 per cent of the necessary and reasonable charges in the community. The Aetna program limits all payment to physicians to charges that are reasonable and customary—let me repeat, "reasonable and customary charges in the community."

What then, shall we say, constitutes a reasonable and customary fee in the community? What factors must be considered to determine such? What weight should be given to the skill and experience of the physician or surgeon, the nature and severity of any complications, the income of the patient, duration of care, and the responsibility assumed in difficult and unusual cases? Who is wise enough to decide this? Certainly not any individual, nor any insurance company, nor any fee schedule no matter how ingeniously devised.

In the past year several cases in which fees under a Major Medical program were questioned were referred from Medical Service to the Committee on Medical Care, to the Executive Board, and then back to the Board of Trustees of Medical Service, without any satisfactory solution being found. This was because no one would or could state authoritatively that any of these fees are or are not customary and reasonable in the community.

It is this that concerns us here tonight. Medical Service needs guidance and help from the members of this Society on this problem. At least a dozen cases are pending which cannot be settled under the present circumstances.

In March 1960 a request from the President of Medical Service was received by the Executive Board for the development of a fee schedule to be used in defining maximum customary and reasonable charges for physicians' services in the Major Medical portion of the Government program. This was to apply only to those subscribers whose incomes exceeded the amounts under which they would be eligible for service benefits (i.e., $6,000 for married, and $4,000 for single). Medical Service suggested also that this could be used in their Major Medical program outside the Federal employees' plan. Later, the commercial companies through the Health Insurance Council also requested such a schedule for their part of the Federal program.

In April 1960 the Committee on Medical Care was directed by the Executive Board to proceed with the development of such a fee schedule as Medical Service had requested. It has been continuously occupied with this problem since then. In addition to its regular meetings, several conferences have been held with representatives of the Civil Service Commission, of Medical Service, of private insurance companies, and with members of the Health Insurance Council. The Chairman of the Committee also consulted various interested individuals in the Society on problems as they arose.

It was as obvious to members of the Committee as it must be to you that no prepayment health insurance plan, even a Major Medical program, can succeed without a predictable cost on which to base premium rates for guaranteed benefits. Predictable costs inevitably require some sort of fee schedule guide. Fee schedules are a most unwelcome but rapidly growing part of a physician's daily practice and there is no way in which most of us can avoid them.

Suggestions were made that the use of the Relative Value Scale adopted by the Medical Society in May 1959 would be the most realistic solution to the problem, providing a suitable dollar conversion factor could be determined. This Relative Value Scale was developed primarily with such a purpose in mind by the Committee on Medical Care in 1958 and 1959. The concept of the Scale, in which all physicians' services were reduced to units and in which these services were all related to each other, requires only a suitable conversion factor to create a workable fee schedule for any given situation. When a dollar value is given to the conversion factor, a fee schedule is produced. This concept of relative value schedules was first developed in California and has now been adopted by 10 other states and the District of Columbia, and is being developed at this time in 15 other states.

The Committee felt strongly that fixed and rigid fee schedules are inherently dangerous and contain evils well appreciated by everyone. It was recognized that in this field of Major Medical coverage a fixed fee schedule would be unacceptable to members of the Society and justifiably so. The Committee recommended, therefore, that the use of the Relative Value Scale in any Major Medical program be coupled to the establishment of a Review Board similar to the present Physicians' Services Committee of Medical Service. It was also recommended that this Board would be empowered to not only adjudicate fees downward but to raise them when, in its opinion, it would be warranted by special circumstances. These recommendations were accepted by the Executive Board at a recent meeting.

As you will remember, the Relative Value Scale adopted by our Society was totally integrated as to Medicine, Surgery, Pathology and Radiology. The units established in it, when coupled with a $5 conversion factor, were generally acknowledged to represent the customary maximum and reasonable charges for physicians' services in this community for subscribers with incomes under $6,000, if married, and $4,000, if single.

When the Committee was faced with the problem of finding a conversion factor suitable for the higher income groups, it soon became obvious, as it did previously in California, and recently in Kansas, that an integrated Relative Value Scale such as ours becomes impractical when the conversion factor is raised or lowered, because overhead costs and volume of work performed by individual physicians or groups are in disproportion in the fields of Medicine, Surgery, Pathology and Radiology. The Committee had before it reports of local physicians' incomes and overhead costs. There were differences of opinion in the Committee as to the validity of these figures and it was emphasized to the Committee that to increase the dollar conversion factor across the board, as would have to be done in an integrated schedule, could cause serious inequities both to subscribers and to physicians. To increase by $1.00 the cost of an item such as a blood count, performed thousands of times a month, could also present Medical Service with a serious increase in costs.

Extensive studies on this problem have been made in California and in other states adopting relative value scales. These studies support this Committee's opinion and are available in the reports of the Four Regional Conferences on Relative Value Schedules made by the AMA Committee on Medical Practices. The Committee concluded that our Relative Value Scale could only be fairly utilized if the Medical Society would authorize a change from the integrated basis to one in which the 4 categories mentioned above could use different conversion factors.

This was recommended to the Executive Board and approved at its last meeting.

Another factor which the Committee considered was that in the fields of Radiology and Pathology fees are usually uniform throughout the community and ordinarily do not vary with patients' income levels except in unusual circumstances. Obviously, charges for consultations or therapy in the fields of Pathology and Radiology would fall under the category of Medicine or Surgery and would, therefore, use their conversion factors.

In an effort to achieve equal fairness to both fellow physicians and to the purveyors of Major Medical coverage to Federal employees, our Committee has, therefore, recommended the following dollar conversion factors to be used with the Relative Value Scale. We feel that this will most accurately reflect the customary maximum and reasonable charges for physicians' services in this community in the area of Major Medical coverage for over-income groups:

For Pathology and Radiology	$5.00
For Medicine	6.00
For Surgery	7.00
For consultation and/or treatment by a pathologist or radiologist, the same coefficients as for Medicine and Surgery	

If any of the above major groups feel that this schedule in their fields would not be realistic, I would suggest that a study be made to see if changes in relative value units in specific cases might not provide more equality than an increase in the conversion factor above those mentioned. As you well know, the Medical Care Committee has been placed under permanent instruction by the Medical Society to consider any and all such requests for change in unit value.

I should like to reëmphasize the following:

1. The Relative Value Scale would *not* be a fixed fee schedule, since a simple report could accompany claims for fees above this schedule which are considered by the physician to warrant higher payment. He could appeal if such a claim was rejected by the Review Board.

2. This schedule is to be used only by Medical Service in its Major Medical coverage for Federal employees or for subscribers outside of the Government. It is also to be used by the commercial companies for their Federal employees' program. In Blue Shield, it is only to be used in the over-income groups.

3. By implementing the Relative Value Scale with the dollar conversion factors as proposed, it should be understood that the fee schedule resulting is generally agreed to be the customary maximum and reasonable charges for physicians' services in this community. When a physician's fees do not conform to this concept they can be submitted to the Review Board by either the physician or the insurance carrier for adjudication.

Respectfully submitted,
Edward W. Nicklas, M.D., *Chairman*
Walter Atkinson, M.D.
Sterling Bockoven, M.D.
Neville K. Connolly, M.D.
Gordon W. Daisley, Jr., M.D.
Luther W. Gray, M.D.
Benjamin Manchester, M.D.
Edward C. Mazique, M.D.
Gerald H. McAteer, M.D.
John M. Orem, M.D.
Jed W. Pearson, Jr., M.D.
W. Robert Perkins, Jr., M.D.
Philip H. Philbin, M.D.
Duane C. Richtmeyer, M.D.
George Tievsky, M.D.
Russell M. Tilley, M.D.

SUPPLEMENTARY REPORT OF THE EXECUTIVE BOARD

This report contains an accounting of the activities and actions of the Executive Board subsequent to the publication of the Annual Report of the Chairman in the Medical Annals. In addition there are a few items which were not included in the report for reasons which will become self-evident.

District Zoning Regulations re Physicians' Offices. At its meeting on September 26, the Board had before it a communication from the legal counsel representing Dr. Allan B. Coleman, an Active member of our Society. Dr. Coleman, he stated, had received a communication from Mr. H. Warren Stewart, Zoning Administrator for the District of Columbia, informing him that he was allegedly violating the D. C. Zoning Regulations by reason of the fact that another physician practiced in his office as an associate. According to the interpretation by the authorities of the pertinent Zoning Regulation, where a physician maintains an office at his residence no other physician may practice at the same address.

Commenting on this interpretation Dr. Coleman's counsel recommended that an amendment to the Zoning Regulations be sought so that Dr. Coleman or any other similarly situated physician might apply for an exception. He requested the support of the Board because, as he put it, "this problem affects countless numbers of physicians practicing in the District. . . ."

Dr. Coleman and his counsel, having been invited to the meeting at which this matter was considered, enlarged upon the implications of the situation. The Board agreed that this was a matter of importance to many Society members and voted to direct the Secretary of the Society to write the District Board of Commissioners supporting Dr. Coleman's proposal that the Zoning Regulations be amended as stated above. This has been done. No action has yet been taken by the Zoning Commission; however, with the Society's approval the Board will pursue this matter vigorously.

Notification of Membership re Discipline of Mem-

bers. The Society's legal counsel has cautioned the Executive Board on a number of occasions against publicizing disciplinary actions which it has taken against members of the Society. On the other hand, the Board has been of the opinion that somehow its actions should be made known to the membership. Following exploration of the matter recently the following procedure was agreed upon and approved by counsel:

In accordance with the provisions of the Constitution and By-laws, lists of applicants for membership are mailed to Active and Life members of the Society prior to their election so that if there are any objections they can be lodged with the Executive Board before action on applicants is taken. Resignations, transfers from one membership status to another, and reinstatements are usually listed in the MEDICAL ANNALS. Henceforth these will be included with the list of applicants sent members. Added will be the names of members, if any, who have been disciplined.

For the benefit of those of you who are not familiar with the procedure followed when complaints are lodged against members, it should be explained that they are first considered by the Grievance Committee, which may recommend to the Executive Board action which it believes should be taken. Fortunately, most complaints are satisfactorily adjudicated by the Committee. However, there have been suspensions in the past several months which, on counsel's advice, have not been reported to members.

Where recommendations are received from the Grievance Committee that disciplinary action be taken, the Board holds a hearing to determine what its action should be. The member against whom the complaint is lodged makes a personal appearance. A stenographic record is kept of the proceedings. When the Board has heard the member against whom the complaint has been lodged and weighed other available information, it decides what action should be taken. The individual against whom the complaint is lodged, if he is found guilty, has a right to appeal to the Society.

Again, the Active and Life members will from now on be informed of disciplinary action in the manner which has been described.

Nomination to Board of Trustees of Medical Service. At its meeting on October 24, 1960, the Executive Board voted to submit for Society approval the following nomination to the Board of Trustees of Medical Service for a term of 3 years beginning at the Annual Meeting of Medical Service to be held in April 1961: Dr. Edward W. Nicklas to succeed Dr. James A. Dusbabek.

Dr. Dusbabek, a member of the Board for 9 years and last year President of Medical Service, wrote the Board that he did not wish to succeed himself.

As stated in the agenda, additional nominations may be made from the floor. At the proper time, your President will ask if there are additional nominations.

Appointment of Member of Board of Trustees of Group Hospitalization, Inc. Annually the Society is requested to appoint one of its members to the Board of Trustees of Group Hospitalization, Inc. This year the Executive Board proposes the appointment of Dr. G. Brooks Brown to succeed Dr. A. Magruder MacDonald. The Society is deeply indebted to Dr. MacDonald for his faithful and able service as its representative on the GHI Board. He is completing his second 5-year term.

Recommendations of Committee on Medical Care. You have already heard the report of Dr. Edward W. Nicklas, Chairman of the Committee on Medical Care. The Board considered the recommendations contained therein at its meeting on October 24 and gave its approval to them.

It should be understood that the proposed dollar values applied to the basic units in the Relative Value Scale will apply only to persons having Major Medical coverage, whether it is with Medical Service or a commercial insurance company. Furthermore, that the application of the dollar value is not to be rigid but flexible.

As pointed out by Dr. Nicklas, application of the dollar value is intended to be a guide as to what is the "customary and reasonable charge" in the community. In the circumstances specified by him, the physician is not bound to adhere in all instances to the dollar value established. Where he submits bills which seem to be out of line, they will be referred to the Review Board, consisting of Society members. This Board will safeguard the interests of the physicians as well as Medical Service and commercial companies writing Major Medical coverage.

As stated above, the Board recommends approval of the Committee's action with respect to the implementation of the Relative Value Scale only for those having Major Medical coverage.

Invitation to Southern Medical Association. It will be recalled that the last meeting of the Southern Medical Association in Washington in 1956 was very successful. It was proposed to the Board by Dr. Oscar B. Hunter, Jr., Councilor of the Southern Medical Association, that an invitation be extended to the Association to meet again in Washington in 1966. The Board voted favorably on the proposal and an invitation has been extended. The only obligation involved where the Society is concerned is to coöperate with the committee on arrangements for the meeting.

Budget for 1961. In examining the budget it should be kept in mind that it relates only to the income and costs of operation and that it is at best an approximate estimate. The Society's books will not be closed until December 31, 1960, following which they will be audited by Wayne Kendrick and Company, Washington, D. C. Public Certified Accountants. Incidentally, this firm has audited the Society's books annually for more than a quarter of a century.

It will be noted that the income of the Society has increased substantially but so have the expenses of operation. The cost of services, excluding those of salaries of the office staff, supplies, and property maintenance has continued to rise. Wage increases in connection with the Medical Bureau operation have also been necessary. Still it will be noted that if the projections are correct there is a fairly satisfactory net income.

Here it should be kept in mind that the expenses of operation do not include capital expenditures such as replacement of equipment and major repairs to the building. Furthermore, when need for additional funds was pointed out a year ago, several reasons for it were advanced:

1. To retire the indebtedness incurred by the Society in remodeling 1710 M Street.
2. To cope with the upward inflationary swing in the costs of operation.
3. To set aside sufficient funds for a building program.

Some of these have been realized. For example, the $28,000 note outstanding against the Society at the beginning of the year has been paid. However, in doing so the Society virtually wiped out its cash reserve. Obviously, this needs to be built up in the next few years because in an operation as large as the Society's there must be a substantial reserve. Not only would this be important in the event of an emergency but a backlog for the building program when it is undertaken.

The area surrounding the Society's building is changing rapidly, new and imposing buildings being erected on many nearby sites. The Society will soon have to determine what it wishes to do with its property.

Aside from these factors there is still the possibility of inflation, which may have a profound effect on the budget for 1961.

Nominating Committee. It will be of interest to you that 821 Active and Life members returned their ballots. The 7 who were elected, listed according to the number of votes which they received, were: Drs. Bernard J. Walsh, Frank D. Costenbader, Frederick O. Coe, Monroe J. Romansky, Calvin T. Klopp, Luther W. Gray, and William P. Herbst. The report of the Committee will be presented to you shortly.

The tellers who counted the ballots were Drs. Robert Stolar and William Oldham. The envelopes containing the ballots were opened in their presence.

Prospects for the Future. There is reason to believe that health legislation vitally affecting the medical profession may be enacted by the coming Congress. High priority will undoubtedly be given an amendment to the Social Security Act providing medical care for the aged. One might anticipate also efforts to broaden benefits under the Federal Employees Health Benefits Act. Where such developments would lead remains to be seen. Every effort will be made by the officers of your Society to keep you informed of what is happening, and, if indicated, special meetings will be scheduled.

Needless to say, your support of the local Blue Shield Plan, Medical Service of the District of Columbia, is more vital now than ever before. Efforts are being made to broaden the benefits of the Service and at the same time keep costs within bounds. This will be no easy task.

To put it bluntly, the 1960's promise to be crucial years for the medical profession. It is therefore important that we as a group be vigilant and realistic in dealing with the problems which will face us.

It should also be mentioned that every incoming President welcomes interested workers to his

VOLUNTARY PREPAYMENT

It is futile at this time to guess as to what of specific value may emerge from the newly-asserted determination of the American Medical Association to develop a "maximum" improvement in the programs of voluntary, nonprofit medical and hospital prepayment plans.

There is little doubt that the hope uppermost in the minds of many of the thousands of AMA members who met here this week was to erect a bulwark against compulsory government programs of medical aid. The resolution they passed specifically stated that such an effort was "compelled" by the "current social, political and economic developments."

These, of course, are the words that will be seized upon most widely in interpreting the AMA action. The fact, however, is that the more realistic doctors, including those District of Columbia physicians who stimulated the AMA action and who are working toward its fulfillment, harbor no illusions that any single new plan can be developed or even proposed which would satisfy all the various medical care needs which currently are being discussed. But they do believe that drastic improvements can be made in existing voluntary Blue Cross and Blue Shield plans, in coördination later with commercial prepayment programs, which would decrease the need for government intervention; and this is the goal toward which they are working.

Officials of the American Hospital Association and the national Blue Cross and Blue Shield organizations are meeting in New York this week end, as a first step, to discuss ways to expand benefits and to develop uniform standards of service throughout the country. Roughly one-quarter of the total nation health-care bill, according to these officials, now is being paid through voluntary prepayment plans. They are convinced that this percentage can be doubled, through coördinated improvements, in the immediate future.

These efforts, in our view, can produce nothing but good. The medical voluntary prepayment movement since World War II has made phenomenal advances, and that fact too often is obscured by criticism of its deficiencies. What is important now is that these shortcomings are being given the attention they deserve, and we are glad that Washington doctors have had a hand in directing a campaign at the national level to correct them.

—Editorial, *The Evening Star*, Washington, D. C., December 3, 1960

"team." Contrary to the belief of some physicians, opportunity to serve on a committee is not closed to any member. If your Presidents have had any difficulty, it is to find physicians who will dedicate themselves to the task at hand. Any member who feels that he can devote time, effort and thought to Society affairs and will serve on a committee should get in touch with the incoming President.

Conclusion. This will be my last meeting as an officer of the Society. I have been your President, a member of the Executive Board for 4 years and the past year its Chairman. Although this has taken much of my time, it has on the whole been a very pleasant and illuminating experience. I am grateful that I have had the opportunity of learning at first hand what the organization does for its membership, which I can assure you is considerably more than many appreciate. Again, thank you for your confidence and support during my years of service.

Respectfully submitted,

William Ross Morris, M.D., *Chairman*
Victor R. Alfaro, M.D.
W. LeRoy Dunn, M.D.
Milton M. Greenberg, M.D.
Raymond T. Holden, M.D.
Donald Stubbs, M.D.
James W. Watts, M.D.
Theodore Wiprud, *Secretary*

E.C.F.M.G. GOAL: THE BEST POSSIBLE MEDICAL CARE*

E. VINCENT ASKEY, M.D., F.A.C.S.
President, American Medical Association

WITHIN THE LAST WEEK or two, I'm sure many of you have been reading about the problems of foreign medical graduates who have failed to pass examinations and who may have to return to their homelands before completing their intern and residency training program. This is a timely subject and I'd like to tell you the views of the AMA. For the benefit of those who may not have followed the newspapers, I'll try to review briefly the development and purposes of the Educational Council for Foreign Medical Graduates—E.C.F.M.G., as it is called.

Also, I'd like to clear up a few erroneous impressions that people may have received from some accounts.

The AMA participated in the formation of the E.C.F.M.G. in 1957.

At that time the House of Delegates said: "Thoughtful physicians . . . do not desire to seek any change that would exclude alien physicians from this country. The primary concern must be for the health care of the American public. The responsibility to share our educational opportunities in medicine with other countries lacking similar opportunities is recognized, but it should not be allowed to have any deleterious effect on our primary concern."

The E.C.F.M.G. program thus was given the task of measuring, to the best of its ability, the level of education of all graduates of foreign medical schools so that they might serve as interns or residents who care for patients. This level was to be comparable to that of students in our own schools at the time of graduation.

I am sure you would agree that to admit to training and patient-care opportunities those foreign graduates whose attainments were less than those of the graduates of American schools would be to discriminate against American students who failed to graduate from our own schools.

Then, in 1958, the AMA House of Delegates approved a Council (E.C.F.M.G.) recommendation to the effect that ". . . it is expected that all graduates of foreign medical schools serving as interns or residents in U.S. hospitals as of July 1, 1960, will have been certified by the E.C.F.M.G."

All hospitals concerned were notified promptly of this action.

Subsequently, permission was granted to extend this deadline under certain conditions to December 31, 1960. In other words, a foreign-trained physician who had not passed a previous examination, but had registered for the September 1 examination was acceptable to the AMA and the American Hospital Association for appointment until at least December 31, whether he passed or failed.

However, when there were numerous expressions of concern regarding the effect on foreign relations which might be created by the minority of those who failed the September examination, E.C.F.M.G. representatives and other national medical groups met with State Department officials to consider ways to ameliorate this potentially unfavorable situation.

As a result of this meeting, 2 fundamental principles were agreed upon:

1. Only those foreign graduates who had demonstrated their qualifications through certification by E.C.F.M.G. should continue to serve as interns and residents beyond December 31, 1960.

2. To give those who have not yet been certified a further opportunity to enhance their medical education, hospitals would be encouraged to develop special educational programs. These would be of educational value to the foreign graduate and would divorce him from any responsibility for patient care.

Thus, in these programs, foreign physicians could participate until June 30, 1961, with approval of the State Department, and their exchange visas would not be withdrawn before that time.

And this would allow the non-certified foreign physician the opportunity to take the next E.C.F.M.G. examination in April, 1961.

We are hopeful that these re-designed educational programs in each hospital will enable the foreign graduates who failed to pass previous examinations to continue their education in the United States, and that there will be no sudden forced exodus of these men and women.

It is true that after December 31, 1960, hospitals face loss of approval of their intern and residency programs if the programs include foreign medical graduates who are not certified by E.C.F.M.G.

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* Address delivered before the International Medical Club in Washington, D.C., November 29, 1960.

In the past, foreign physicians were granted visas to continue their education under the Smith-Mundt Act. The U.S. Immigration and Naturalization Service issued the visas, working closely with the State Department in its educational and exchange program for foreign students.

To qualify a foreign graduate had to be enrolled in an educational program approved by the State Department.

The intern and residency program, whose educational standards were established by the AMA, was accepted by the State Department as meeting the requirements set forth in the educational exchange program authorized by Congress.

Hereafter, however, foreign doctors who seek training as interns and residents in this country under the exchange program must pass examinations *in their own countries before coming to the United States*. Only then will they be permitted to apply for a five-year exchange-visitor visa.

Within a few days, representatives from 20 private groups and Government agencies will meet here in Washington to study and reëvaluate the Medical Graduate Exchange Program. I am sure that this meeting will help to clear up some of the current misunderstandings about the program just as we in the AMA and the American Hospital Association have been trying to do in the last week or so.

At this time, I do want to assure everyone that we are not discriminating against foreign physicians. They receive the same examination that is administered to American students who study abroad and who wish to enter intern and residency programs here in the United States.

We are not concerned about what a man's nationality or cultural background may be. All we want to know is whether or not he is capable of caring for patients.

We are concerned that his previous training matches the standards of our own medical schools. If he is to complete his education as an intern or a resident in an American hospital, we feel it is our responsibility to see that he is properly trained.

I'm sure you realize that in many other lands the standards of medical education vary, just as they did in our own country several years ago. There are schools whose curriculum does not in any way compare with that available in United States schools.

Therefore, it has been necessary to develop a standard by which we can test those foreign medical graduates who wish to treat patients in this country.

We have done this for one reason only—to safeguard the health of the American patient. May I assure you that there is no desire on the part of the AMA to limit the number of foreign residents or interns, since the vast majority of them intend to return to their own countries on completion of their educational programs.

I also hasten to point out that in the last E.C.F.M.G. examination a record number of foreign-trained physicians passed. Out of 7,303 who took the test, 5,306 passed, or some 71 per cent. In addition, another 1,405 foreign doctors took the test in 66 centers outside the United States, and 926 passed it.

Thus, a total of 8,713 took the examination and 6,232 passed, leaving 2,481 who failed.

It is this latter group, especially the 1,997 in this country who failed, that is causing the current problem.

However, let's not forget that 5,306 foreign physicians did pass and are now certified to take care of patients in our hospitals. I certainly am encouraged by the showing of these men and women from other countries.

I think you will agree that it would be unfair to the patients in American hospitals to be treated by those who have, so far, failed to demonstrate their proper qualifications.

Patients have a right to the highest quality of medical care in our hospitals. And that quality of care can be given only if every physician—regardless of his origin—is adequately trained and fully qualified.

Standards for intern and residency programs are high; they must be maintained if the best possible care is to be rendered. I am sure patients do not want a lowering of standards, and that is why the medical profession and the hospitals are insisting upon the best in medical care and in physicians for the American people.

The entire operation of medical education in the United States is based on quality and high standards.

We want good medical students, not poor ones.

We want good doctors, not poor ones. We want good interns and residents, not poor ones.

Under our high standards, naturally, some applicants are not going to be accepted into medical school. And even some admitted students are not going to pass their training course.

But once accepted into U.S. medical schools and once graduated from these schools, we believe that our graduates are highly trained men and women ready to proceed into intern and residency programs.

Because we cannot judge those accepted into foreign medical schools, and because we have no control over their graduation from those schools, we do feel that some examination had to be set up to test those from foreign lands who wish to take further training in our hospitals and thus to care for American patients. Thus, the E.C.F.M.G. program was inaugurated.

Certainly, there can be no disagreement that this program was wise and necessary.

And considering that the examination is the same one that is required of American students who study in foreign medical schools, certainly no one could rightly claim that the test is unfair or discriminatory.

I also wish to add that the test can be taken more than once; it is not a one-time shot. Some foreign medical graduates have taken the test a second time and passed. Some have taken it more than once and failed each time.

I personally believe that the E.C.F.M.G. program is a sound one. It offers an examination and certain assistance to foreign medical graduates who seek its certification. It does not enforce or restrict anything. It grants 2 certificates: one, the "Regular" certificate for persons scoring 75 and above, and the other, a so-called "Temporary" certificate for those scoring 70 through 74.

And the only reason for the examination is to assure hospitals that prospective house staff has sufficient skill in medicine and English to be able to render safe patient care. Until now many hospitals have found it difficult to determine in advance whether a candidate was able to give such patient care.

Now we have an examination program that can do, and is doing, just that.

For this reason, among others, the AMA is holding fast to its current policy relating to graduates of foreign medical schools. However, we in no way wish to penalize those who have failed, and so we are making every effort to provide these men and women with additional opportunities to continue their education programs until such time as they have qualified for intern and resident training involving direct patient care.

I am sure you will agree that our position is right and that it deserves the support of the profession and the American public.

CLAIMS FORMS FOR SUPPLEMENTAL BENEFITS OF THE FEDERAL EMPLOYEES' PROGRAM

Concern has been expressed that patients are bringing these forms to the physician for him to complete and hand back to the patient. The form calls for a complete diagnosis. There are cases in which the physician does not wish his patient to know the diagnosis. Information has been received from the Medical Service of the District of Columbia as follows:

"Physicians may report services rendered Federal employee patients without disclosing the diagnosis.

"It is not required that the claim for supplemental benefits be sent in by the patient, and an acceptable procedure would be for the subscriber to fill out his portion of the claim form and turn it over to the physician to be completed and mailed in by the physician. However, this might entail some inconvenience in submitting supporting evidence for other services for which benefits are being claimed, or it might happen that the form would not be completed properly and would be returned to the subscriber for additional information.

"A better arrangement would be for the physician to indicate on the claim form that the diagnosis will be furnished directly to the Supplemental Claims Department upon request. A claim received with such a notation could be transmitted between the subscriber and the Claims Department without concern, and the Claims Department could approach the physician directly and keep the diagnosis confidential."

BARBARA MURPHY—PRESIDENT OF WOMAN'S AUXILIARY*

Barbara Fuller Murphy is the President of the Woman's Auxiliary to the Medical Society of the District of Columbia for the year 1960–61. Barbara was born in Maiden Rock, Wisconsin, attended River Falls Teachers College, graduated in nursing from the Kahler School at the Mayo Clinic, spent several months as an Air Force nurse, then graduated in Foreign Affairs from George Washington University in 1949, Phi Beta Kappa.

The Murphys were married at Langley Field, Va., in 1945, moved to Washington in 1946, and now live at 5300 Boxwood Court, Westmoreland Hills, with their 4 children, Nicole Patricia (age 11), James Peter, Jr. (age 9), Brian Patrick (age 6) and Michael Christopher (age 4), and poodle Babette, also age 4. Dr. J. Peter Murphy, who graduated from Yale Medical School, practices neurosurgery and neurology in the Metropolitan Area and is on the faculty of the George Washington University Medical School.

Not the least of Barbara's many avocational accomplishments was her starring role in the movie, "A Concept of Modern Maternal and Neonatal Care," produced by Drs. John L. Parks and Preston A. McLendon under the aegis of George Washington University in 1949. She was selected for medical "show biz" not only because she is vivacious and attractive but also because she was one of Dr. Parks' expectant patients.

Bowling trophies have been augmented recently by a miniature pin-and-ball charm to attach to a variegated and personally documentary charm bracelet which memorializes, among other things, a recent trip through Europe. Such other spare time that remains from the children's school transportation car-pool circuit is dispensed amongst cooking for a large and appreciative family, gardening, playing golf, winter ice-skating and participating in the activities of the Women's Board of George Washington University Hospital, the Chevy Chase Women's Club, and the Washington Drama Society. The Murphys are members of the Kenwood Country Club, where they may occasionally be found digging up the turf with other duffers. Their children attend Landon School and Ursuline Academy.

MRS. JAMES PETER MURPHY
President of Woman's Auxiliary

Of particular interest in Barbara's year as Auxiliary President was the 1960 Clinical Meeting of the American Medical Association, when the Auxiliary ladies were hostesses to the national women's group. All officers and committees worked steadily to assure a proper and warm welcome. They further hope to sponsor a successful and contributory program of assistance to the Medical Society during the ensuing year. In the spring, one of the larger projects will be a theatre benefit for the American Medical Education Fund.

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* EDITOR'S NOTE: Not many wives, and particularly doctors' wives, can boast of a husband as a press agent. The above profile of this year's President of the Woman's Auxiliary, written by Dr. Murphy in an informal style, with both appreciation of and admiration for his wife's accomplishments, needed no editing.

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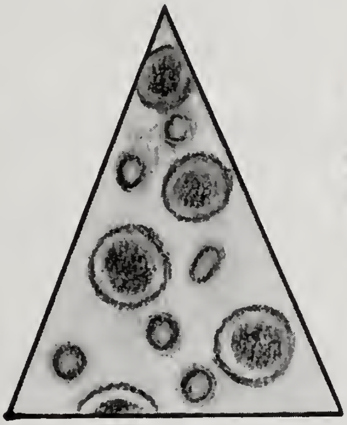

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For further information call or write:

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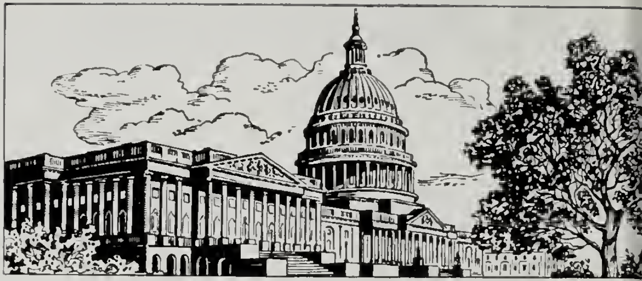

NEWS & PERSONALS

Meetings

The Section on Physical Medicine and Rehabilitation of the Medical Society of the District of Columbia will meet on Thursday, January 26, at the National Institutes of Health, in the Department of Physical Medicine, at 8:00 p.m. Dr. Desmond S. O'Doherty, Professor and Chairman of the Department of Neurology of Georgetown University School of Medicine, will deliver an address on the subject of "Spasticity." All members of the Medical Society are invited to attend.

The St. George Society, which is sponsoring a series of educational lectures on cancer during the fall and winter months, will hold its next meeting in the auditorium of the D. C. Medical Society on Tuesday, February 14, at 8:00 p.m. The subject to be presented is "Pathological Physiology in Human Cancer." The speaker will be Dr. Alfred Gellhorn, Professor of Medicine, College of Physicians and Surgeons, Columbia University. Dr. Gellhorn is also Chief of Medical Service of the Francis Delafield Hospital in New York City. This meeting is open to physicians and other interested persons.

The Washington Psychiatric Society and the St. Elizabeths Hospital Medical Society will hold a joint meeting, February 24, in the D. C. Medical Society's auditorium, beginning at 8:30 p.m. Members of the Medical Society are cordially invited to attend.

General News

The Executive Board of the Medical Society of the District of Columbia held its regular meeting on November 21, 1960. Dr. W. Ross Morris, Chairman, presided.

Dr. Frederick O. Coe was designated the Society's delegate to the Washington Academy of Sciences for the ensuing year. Dr. Coe has formerly served as a Vice President of the Academy, but the By-laws have now been revised to provide for delegates from affiliated societies instead.

Because a large number of members of the Society opposed photographing the membership, the Board voted to abandon the project.

A canvass of the Society showed that a substantial majority of those who replied favored establishing a group of member-subscribers to Medical Service of the District of Columbia; therefore, the Board voted to authorize the Secretary to canvass the Society's membership for the purpose of establishing such a group of member-subscribers to Medical Service, with participants limited to Active and Life members.

Dr. James E. Chapman, Chairman of the Committee on Emergency Medical Service, submitted a report on his participation in the 11th County Medical Society Conference on Medical Disaster Care, held in Chicago, November 4–6. It was accepted with commendation.

Dr. Josephine J. Buchanan, head of the Department of Physical Medicine and Rehabilitation at D. C. General Hospital, was recommended to the

Board as a nominee for the "Physician's Award" for her outstanding contributions to the welfare and employment of the physically handicapped workers of the country. The Board endorsed the nomination.

The Board of Trustees of the Greater Southeast Community Hospital Foundation has appointed its **Physicians' Advisory Committee** prior to construction of the hospital, which is to be built at 13th Street and Southern Avenue, S.E. Appointees are as follows:

General Practice: Drs. Frank S. Pellegrini and Herbert Wisotsky
Internal Medicine: Drs. Frank J. Talbot and William D. Lambert
Obstetrics and Gynecology: Drs. Pasquale De Felice and Robert C. Hooker
Pediatrics: Dr. Leroy E. Hoeck and Louis L. Cross
Surgery: Drs. George D. Gartland and Duane C. Richtmeyer
Pathology: Drs. Oscar B. Hunter, Jr., and Kenneth L. McCoy
Radiology: Drs. John S. Hashim and John A. Long

In the list of officers and meeting data of **medical societies with limited membership,** which was published in the November, 1960 issue of the MEDICAL ANNALS, the **District of Columbia Trudeau Society** was, unfortunately, omitted. The officers are: Dr. Joseph W. Peabody, Jr., President, and Dr. William J. Washington, Jr., Secretary-Treasurer. Four meetings are held per year, as called. The place of meeting is usually the District of Columbia Tuberculosis Association building.

The data on **Sections of the Medical Society,** which appeared in the November issue, also omitted one, **the Section on Plastic Surgery.** This Section meets every 2 months, or 6 times a year, with the next meeting to take place in January 1961. The following officers for 1960–61 were reëlected on November 7:

Dr. William C. Meloy, *Chairman*; Dr. Arthur Dick, *Vice Chairman*; and Dr. Alfred J. Suraci, *Secretary-Treasurer.*

Dr. John D. Porterfield, Deputy Surgeon General of the Public Health Service, attended the international **Conference on Cholera** in Dacca, East Pakistan, as the representative of Surgeon General Leroy E. Burney. The 4-day conference, which opened December 5, was sponsored by the South East Asia Treaty Organization and the National Institutes of Health.

During the opening session of the Conference, the Pakistan-SEATO Cholera Research Laboratory was dedicated by the Governor of East Pakistan. **Dr. Fred L. Soper,** recently retired Director of the Pan American Sanitary Bureau, and now on the staff of the National Heart Institute, will be Director of the Laboratory. The Laboratory, which has been made available by the Pakistan Government, will be housed in a 3-story wing of the Institute of Health in Dacca. The Government of Pakistan is also providing the services of certain administrative personnel as well as housing for personnel from other member nations.

Special laboratory equipment, costing approximately $100,000, has been purchased by the National Institutes of Health with funds which the United States has allocated as its contribution to the SEATO Cholera Research Program. The total sum allocated by the United States for this program, which was initiated in May, 1959, amounts to over $400,000.

Dr. Porterfield and Dr. Soper are both Associate members of the D. C. Medical Society.

The Association of Military Surgeons of the United States closed its 67th Annual Meeting at the Mayflower Hotel on November 2, with a total registration of 2,086. There were 99 foreign delegates representing 36 foreign countries.

Among the officers for 1961 are 2 Honorary members and 1 Active member of the D. C. Medical Society. Dr. Leroy E. Burney, Surgeon General of the U.S. Public Health Service, is President. Dr. William S. Middleton, Chief Medical Director, Veterans Administration, and Brigadier General Frank E. Wilson, M.C., U. S. Army Reserve, are Vice Presidents.

The next Annual Meeting of the Association will be held at the Mayflower Hotel in Washington, November 6, 7, and 8, 1961. Rear Admiral Kenneth R. Nelson, Chief Medical Officer of the U. S. Coast Guard, will serve as General Chairman. Admiral Nelson is an Active member of the D. C. Medical Society.

Chairman of the Scientific Program Committee for 1961 is Dr. Luther L. Terry, Assistant Director of the National Heart Institute. Dr. Terry is a Consulting Editor to the MEDICAL ANNALS.

Dr. John Paul North, Chief of Surgical Service at the Dallas, Texas, Veterans Administration Hospital and Clinical Professor of Surgery at the University of Texas Southwestern Medical School, will become **Director of the American College of Surgeons** on January 31. He will succeed Dr. Paul R. Hawley, who has been Director of the College since 1950.

Dr. North has been a Fellow of the College since 1935. He is a Governor and a member of the Committee on Trauma and Chairman of the Subcommittee on Traffic Safety. He is also a member of the Advisory Council to the President's Committee for Traffic Safety.

A native of Buffalo, N. Y., he received his degree in medicine from the University of Pennsylvania. During World War II he was Chief of Surgical Service in the 20th General Hospital, China-Burma-India Theater.

Dr. Heinz Lord, a practicing surgeon of Barnesville, Ohio, has been elected by the General Assembly to succeed Dr. Louis H. Bauer as **Secretary General of The World Medical Association.** Dr. Lord assumed his new duties on January 1, 1961.

Dr. Bauer has held the position since 1948. He will continue to serve The World Medical Association as a consultant.

Mr. H. James Carter has been appointed **Executive Secretary of the District of Columbia Academy of General Practice.** Offices of the Academy are at 3315 Brooklawn Terrace, Chevy Chase 15, Md.

In memory of David Perry Steinman, son of Dr. Erwin Steinman, an Active member of the D. C. Medical Society, friends and classmates are establishing a **scholarship fund** offering an annual stipend to a sophomore student in the School of Medicine of George Washington University. The scholarship fund will be administered by the University and the recipient will be chosen annually by the Scholarship Committee of the School of Medicine on the basis of need and academic performance. Contributions should be made to The George Washington University, for the David Perry Steinman Memorial Scholarship Fund, School of Medicine, 1339 H Street, N.W., Washington 5, D. C.

Dr. William Chin, President of the District's **Chinese-American Lions Club,** presented a check for $880, November 23, to Dr. George F. Bogan, Chairman of the Eye Bank Committee of the District's Lions Chapter 22-C.

With the December 1960 issue the *United States Armed Forces Medical Journal* ceased existence. It had been published for 11 years.

Personals

Dr. Preston A. McLendon was named Chairman of the D. C. Commissioners' Youth Council, November 17. The Council is a group of citizens, appointed by the D. C. Commissioners, to investigate and recommend measures designed to curb delinquency behavior. The Council has a close working relationship with heads of the D. C. Health Department, public schools, public welfare agencies, police, juvenile court, etc. It has been charged with carrying out the recommendations of the recent White House Conference on Children and Youth as they relate to this community. Two other physicians serve on the Council, Dr. C. Herbert Marshall and Dr. Daniel L. Finucane; the latter represents the D. C. Health Department.

Dr. Thomas F. Keliher, Washington internist for 25 years, has accepted the post of Associate Professor of Medicine and Director of the Georgetown University Diagnostic Clinic. He assumed his new duties on January 1.

Dr. Keliher graduated from Georgetown University School of Medicine in 1934 and served as intern and resident physician at Georgetown Hospital during the following two years. He also spent a year in postgraduate study of internal medicine at the Lahey Clinic in Boston. He has served as Clinical Professor of Medicine at Georgetown and is consultant in medicine to the United States Air Force (Andrews Air Force Base). Dr. Keliher is a Fellow of the American College of Physicians.

Dr. William Ronald Strong has been appointed by the D. C. Board of Commissioners to the Emergency Ambulance Service Advisory Committee, succeeding

DISTINGUISHED GUESTS AT AMA DELEGATES' DINNER

The Medical Society of the District of Columbia was host at the reception for AMA delegates and guests preceding the Delegates' Dinner in the Presidential Ballroom of the Statler-Hilton Hotel, November 28. Greeting guests on arrival are (left to right): THEODORE WIPRUD, Secretary of the District Medical Society; PRESIDENT OF THE AMA, DR. VINCENT C. ASKEY; MRS. ASKEY; MAJOR GENERAL HOWARD McC. SNYDER, Personal Physician to President Eisenhower, who was the guest of honor at the dinner; MRS. SNYDER; MRS. VICTOR R. ALFARO; MRS. WIPRUD; DR. ALFARO, President of the Medical Society of the District of Columbia.

Dr. Harold H. Hawfield, and **Dr. John N. Shadid** has been appointed an alternate member of the Committee, succeeding Dr. Strong.

Dr. Wallace M. Yater has been appointed Chairman of the Medical Committee for the 1961 March of Dimes campaign of the Washington Metropolitan Area, which runs from January 2 through January 31. The appointment was made by Mr. A. E. Giegengack, Chairman of the Board of the First Federal Savings and Loan Association, who is Campaign Director for 1961.

Dr. Sterling V. Mead, formerly President of the American Dental Association and Associate member of the D. C. Medical Society, was honored, November 9, at a dinner at the National Naval Medical Center. Rear Admiral C. W. Schantz, Chief of Dentistry, commended Dr. Mead for his efforts in promoting legislation to increase the effectiveness of Naval dentistry.

Dr. Raymond T. Holden was one of four Captains in the Inactive Naval Reserve Medical Corps who were selected for promotion to the rank of Rear Admiral. During World War II Dr. Holden was on active duty in the Naval Medical Reserve Corps from January 1942 to May 1946, when he was separated with the rank of Captain.

Dr. Walter A. Bloedorn, Emeritus Professor of Medicine at George Washington University School of Medicine, was reëlected President of the Gorgas Memorial Institute of Tropical and Preventive Medicine at its Annual Meeting in November. Dr. Bloedorn has held this post for a number of years.

Dr. Roy L. Sexton, Chairman of the District Red Cross Chapter's Safety Services, was cited, December 6, in appreciation for some 35 years of volunteer service. The citation was made at the Chapter's observance of the 50th Anniversary of the Red Cross First Aid Service and the 20th year of the Chapter's own First Aid Corps.

Dr. Joseph W. Peabody, Jr., was elected Second Vice President of the Southern Chapter of the American College of Chest Physicians at its 17th Annual Meeting, held in St. Louis, Missouri, October 30–31, 1960.

Dr. Frank R. Shea was honored for the medical care he has given over many years to the Brothers at De La Salle Street, N.E. The Brothers, a teaching order founded in France in the 17th century, conferred letters of affiliation on Dr. Shea, making him an honorary Christian Brother.

Dr. Walter K. Myers was elected a director of the American Security & Trust Company, November 15.

D. C. BENEFITS FROM MARCH OF DIMES

The District of Columbia has been the principal beneficiary in the allocation of March of Dimes funds raised in the state over the past 23 years, it was disclosed this month in a financial summary prepared by The National Foundation of New York City.

More than 62 cents of every dollar from the District's March of Dimes has been returned for use in aiding disease victims and in research and education projects conducted by District institutions. Of the remaining 38 per cent accruing to the National Headquarters, a considerable amount also has gone back to the District of Columbia in shipments of polio vaccine and gamma globulin, in scholarships or fellowships to District residents, and in other Nation-wide services conducted by The National Foundation.

The summary covers the period since the first March of Dimes was held in January, 1938, and compares the net total of funds raised in D. C. with amounts made available to the District through September 30, 1960.

In this period, the District of Columbia Chapter of the March of Dimes organization raised a net total of $3,362,536.16, at an average fund-raising cost of 13½ per cent. Of this amount, $1,395,308.64 has been available to the Chapter in carrying out its extensive patient aid program.

In addition, 31 grants totaling $697,888.60 have been made in support of research and professional education projects at D.C. institutions. Principal recipients of these grants have been George Washington University, $473,208.55, and the United States Public Health Service, $166,375.90. Other grantees include Georgetown University, Catholic University, Children's Hospital, and Howard University.

Over and above the 62 per cent used by these institutions and the District Chapter, The National Foundation has sent into the District $17,644.69 worth of Salk vaccine and 39,394 c.c.'s of gamma globulin in support of its polio prevention programs. The scientific research program which developed polio vaccines was financed by the national office's share of contributions.

Two years ago the National Foundation for Infantile Paralysis changed its name to The National Foundation in expanding its areas of interest beyond polio to include birth defects and arthritis, using the scientific knowledge and experience gained in the fight against polio.

The New March of Dimes takes place throughout the month of January.

Membership

The following applicants for membership were duly elected to membership by the Executive Board, November 21, 1960, in accord with Chapter II, Article VIII, of the Constitution and By-laws of the Society.

Active Members

Leonidas A. Ayton, 3847 Minnesota Avenue, N.E.
Frank J. Bepko, Jr., 1908 North Oakland Street, Arlington 7, Va.
Paul A. di Sant'Agnese, 5310 Falmouth Road
Nicholas S. Ionedes, 2025 Eye Street, N.W.
James L. Manuell, 2500 Q Street, N.W.
John W. Rout, 4016 19th Place, N.E.
Leslie Schaffer, 4201 Cathedral Avenue, N.W.
William H. Seward, Jr., 6221 Redwing Road, Bethesda, Md.
Alma F. Skinner, 4201 Massachusetts Avenue, N.W.
Robert W. Woods, Washington Hospital Center

Associate Members

Josef H. Meir, Georgetown University Hospital
William F. Sheeley, 1700 18th Street, N.W.
Ira N. Tublin, 2821 Ivydale Street, Silver Spring, Md.

Resident-Intern Member

Azeez V. Khayat, St. Elizabeths Hospital

Five New Life Members

Chapter II, Article III, of the Constitution of the Society, reads as follows:

"Life members shall be Active members who have been Active members for a total of forty years. They shall have all of the privileges of Active membership and shall be exempt from paying dues and assessments."

Our honor roll now numbers 69. The congratulations of the Society are extended to:

Seniority Number		*Date of Membership*
778	Frank J. Eichenlaub	January 19, 1921
779	Preston A. McLendon	January 19, 1921
782	William T. Gill, Jr.	January 22, 1921
785	Frank L. Williman	March 8, 1921
796	James M. Fadeley	June 1, 1921

who have for forty years been on the roster, meeting all dues and assessments and lending their support to the Society by frequent attendance. Their status is now elevated to Life membership.

Books Received

Acknowledgment is made of the following books which have recently been received. Selections will be made for more extensive review in the interest of our readers and as space permits. Physicians are urged to submit reviews of additional books which, in their opinion, merit comment.

Resuscitation of the Newborn Infant. Edited by HAROLD ABRAMSON, M.D., Professor of Clinical Pediatrics, New York Medical College, New York, N. Y.; Director of Maternal and Child Health Program, New York Medical College-Metropolitan Medical Center, New York, N. Y.; Attending Pediatrician, Flower and Fifth Avenue Hospitals, New York, N. Y.; Visiting Pediatrician, Metropolitan Hospital, New York, N. Y.; Chief, Communicable Disease Service, Metropolitan Hospital, New York, N. Y.; formerly Epidemiologist, Bureau of Preventable Diseases, New York City Department of Health. Price, $10.00. Pp. 274, illustrated. St. Louis: Mosby, 1960.

The Medical Assistant. A Guidebook for the Nurse, Secretary, and Technician in the Doctor's Office. MIRIAM BREDOW, Dean of Women, Eastern School for Physicians' Aides, New York. Price, $7.50. Pp. 430. New York: McGraw-Hill (Blakiston Division), 1958.

The Senescent In Industry: Medical Evaluation of His Employability and Health Maintenance. GEORGE C. DOWD, M.D., Vice-President, American Geriatrics Society; Chairman, National Advisory Committee on Industrial Employment of Older People, American Geriatrics Society; Director, Department of Geriatric Medicine, Boston Evening Clinic and Hospital, Boston, Massachusetts. Pp. 94. Published under a grant from the American Geriatrics Society, 1960.

Modern Occupational Medicine, 2nd ed.—thoroughly revised. Editors: A. J. FLEMING, M.Sc., M.D., F.A.C.P., Medical Director, E. I. du Pont de Nemours & Company, AND C. A. D'ALONZO, M.D., F.A.C.P., Assistant Medical Director, Medical Division, E. I. du Pont de Nemours & Company. Associate Editor: J. A. ZAPP, Ph.D., Director, Haskell Laboratory for Toxicology and Industrial Medicine, E. I. du Pont de Nemours & Company. Price, $12.00. Pp. 587, with 66 illustrations and 1 color plate. Philadelphia: Lea & Febiger, 1960.

Infectious Diseases of Children, 2nd ed. SAUL KRUGMAN, M.D., Professor and Chairman, Department of Pediatrics, New York University School of Medicine, New York, N. Y.; Director, Pediatric Service, Bellevue Hospital Center, New York, N. Y.; Director, Pediatric Service, University Hospital, New York, N. Y., AND ROBERT WARD, M.D., Professor and Head, Department of Pediatrics, University of Southern California School of Medicine, Los Angeles, Calif.; Physician-in-Chief, Children's Hospital, Los Angeles, Calif. Price, $13.00. Pp. 398, with 55 illustrations and 7 color plates. St. Louis: Mosby, 1960.

Progress in the Treatment of Fractures and Dislocations, 1950–1960. THOMAS B. QUIGLEY, M.D., Assistant Clinical Professor of Surgery, Harvard Medical School; Surgeon, Peter Bent Brigham Hospital, AND

Henry Banks, M.D., Clinical Associate in Orthopedic Surgery, Harvard Medical School; Associate in Orthopedic Surgery, Peter Bent Brigham Hospital. Price, $2.50. Pp. 102. Philadelphia: Saunders, 1960.

Blood Diseases of Infancy and Childhood. Carl H. Smith, M.A., M.D., Professor of Clinical Pediatrics, Cornell University Medical College, New York, N. Y.; Attending Pediatrician, The New York Hospital, New York, N. Y.; Consulting Pediatrician, Beekman-Downtown Hospital, New York, N. Y.; Fitkin Memorial Hospital, Neptune, N. J.; Misericordia Hospital, New York, N. Y.; New York Infirmary, New York, N. Y.; St. Joseph's Hospital, Far Rockaway, N. Y.; Sea View Hospital, Staten Island, N. Y.; Consulting Hematologist in Pediatrics, Lenox Hill Hospital, New York, N. Y. Price, $17.00. Pp. 572, illustrated. St. Louis: Mosby, 1960.

Ciba Foundation Study Group No. 5: Regulation of the Inorganic Ion Content of Cells, in honor of Prof. E. J. Conway. G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P., and Cecilia M. O'Connor, B.Sc., Editors for the Ciba Foundation. Pp. 100, with 16 illustrations. Boston: Little, 1960.

Obituaries

HARRY ALFRED ONG, M.D., F.A.A.P.

(1885–1960)

Dr. Harry Alfred Ong, well-known Washington pediatrician who was associated with Children's Hospital during his entire professional career, died, November 18, 1960, at Georgetown University Hospital.

Dr. Ong was born in Knoxville, Ohio, September 11, 1885 to Oliver M. and Mary C. Ong. The family moved to Washington, D. C., where Dr. Ong attended the public schools. He graduated in medicine from George Washington University in 1908.

Dr. Ong interned at Children's Hospital, Washington, and at the United States Marine Hospital, Staten Island, N. Y. He continued his postgraduate studies as resident physician in pediatrics at the Lying-In and Bellevue Hospitals in New York.

Following his specialty training he returned to the District of Columbia and began the practice of pediatrics in 1910. He was on the senior advisory staff of Children's Hospital at the time of his death. He had also served on the staffs of Doctors, Georgetown, and D. C. General Hospitals for many years. With the advent of World War I, he interrupted his practice to serve as a Lieutenant in the Army Medical Corps.

Dr. Ong was Past Chairman of the Board of the Children's Country Home. He was Associate Professor of Pediatrics at Georgetown University School of Medicine from 1912 to 1923, and held the same position at George Washington University School of Medicine from 1923 to 1931.

He was a diplomate of the American Board of Pediatrics, a Fellow of the American Academy of Pediatrics, and a member of the American Medical Association. He was elected to Active membership in both the Medical Association of the District of Columbia and the D. C. Medical Society in 1911, and became a Life member of the latter in 1952. He was a member of the George Washington University Medical Society, the Hippocrates-Galen Society, and Sigma Alpha Epsilon fraternity. He belonged to the Chevy Chase Country Club and All Saints Episcopal Church.

Surviving him are his wife, Mrs. Eleanor Homiller Ong, of the home address, 7013 Beechwood Drive, Chevy Chase, Md.; a daughter, Mrs. Eleanor Marie Chatfield-Taylor, of Mantua Farms, Heathesville, Va.; two sons, Harry Alfred Ong, Jr., of Medford Lakes, N. J., and Dr. Beale Hibbs Ong, on the staff of Boston (Mass.) Children's Hospital.

Griseofulvin for Dermatomycosis—Weiner, Gant and Gould

(Continued from page 6)

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Control of Emesis with Trimethobenzamide—Shnider and Gold

(*Continued from page 9*)

20 minutes when the drug was given intramuscularly, the action lasting for an average of 3 hours regardless of the route of administration.

Two patients experienced dizziness and 1 became slightly drowsy, but these symptoms could not be specifically attributed to the drug.

Trimethobenzamide appears to be an effective and safe antiemetic agent for use in the control of emesis in patients with neoplastic disease or its complications.

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Transpulmonary Ergotamine Tartrate for Headache—Blumenthal and Fuchs

(*Continued from page 12*)

SUMMARY

Our experience with transpulmonary administration of ergotamine tartrate through the Medihaler apparatus indicates that this agent is effectively absorbed by this route in all patients tested to date. The overall rate of effectiveness of 83 per cent of patients with vascular headache treated compares favorably with other forms of ergotamine tartrate previously reported. The rate of onset of relief and the total dosage required are comparable to reports of the intravenous administration of this agent for relief of headache. Side-effects appeared to be minimal when ergotamine tartrate was administered in this fashion.

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Antecedents of Mental Health—Perkins

(*Continued from page 18*)

tions. Progress will have to be based upon empirical knowledge before scientific data are at hand. Discoveries will be followed by realignments in mission as hazards to the population are changed. Plans must encompass the range of ages and embrace the whole group of socio-psychiatric problems. The units will be of various organizational types in order to accomplish the 4 forms of mental health programs: consultation, direct patient service, education, and research. The personnel engaged will be multidisciplinary in training and experience

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Carcinoma of Urinary Bladder—Potter

(*Continued from page 22*)

Combining reported series, of a total of about 600 patients, only a handful were alive 5 years after operation when 1 or more lymph nodes were involved with cancer. It would appear, therefore, that when lymph nodes are positive, lymphadenectomy is almost a futile procedure; when nodes are free of cancer this operation is, of course, unnecessary. Currently we have abandoned lymphadenectomy in the treatment of bladder carcinoma. We are willing to change our concept, however, if new evidence is reported.

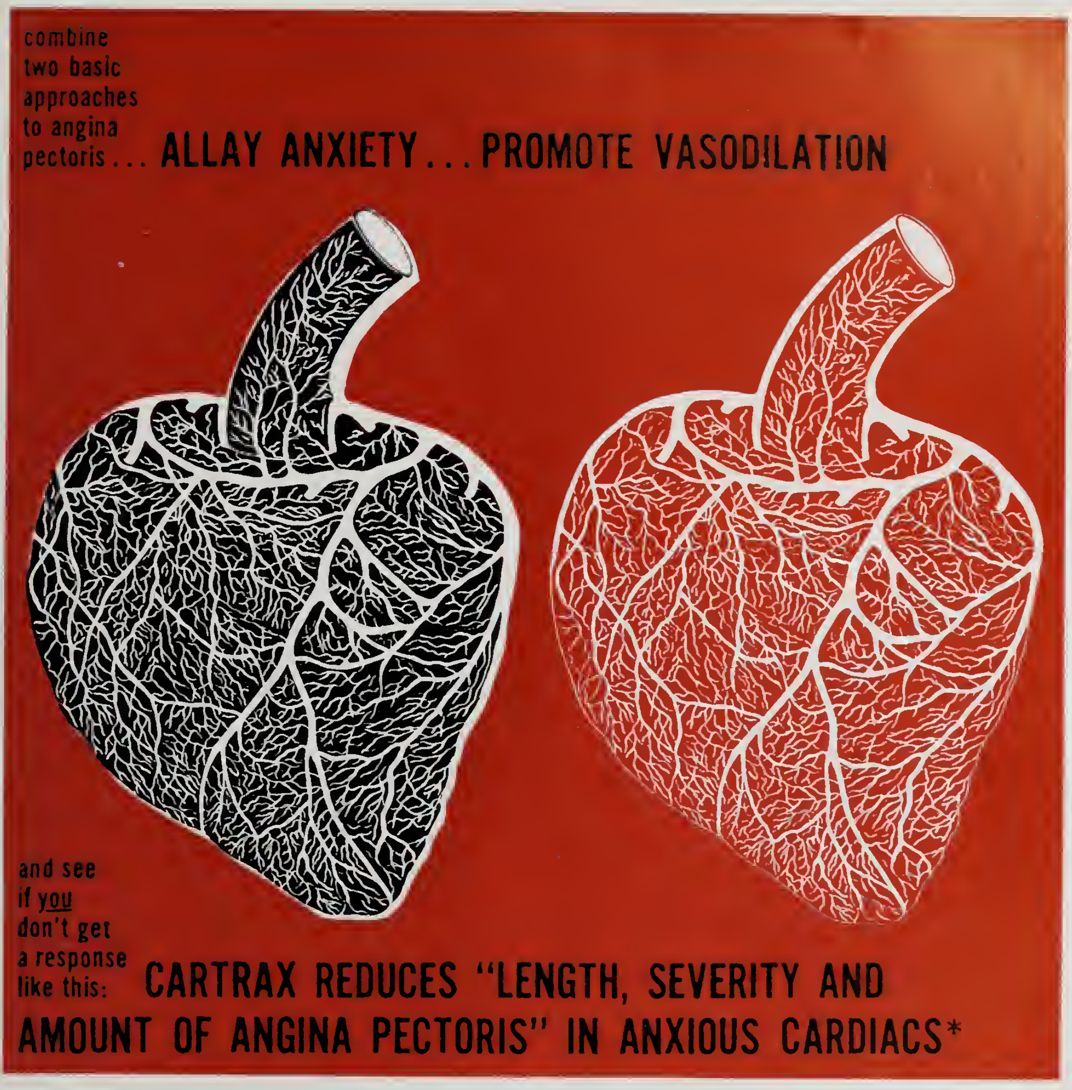
The prognosis relative to cancer cure of the patient reported upon today at this Tumor Board is guarded. He had a 4-year history of recurrent squamous-cell cancer of the bladder prior to definitive therapy. In addition, the bladder specimen excised demonstrates multiple areas of carcinoma in situ. Neither of these facts would permit a favorable prognosis.

Student: How frequently do you see extensive carcinoma in situ without invasion of the bladder as in the case today?

Dr. Baker: This is a most infrequent occurrence. Of 300 bladder specimens available to us, this is only the second that did not show evidence of invasion.

Student: What is the significance of the squamous metaplasia of this bladder?

Dr. Baker: I know of no definite proof that squamous metaplasia is a precursor of malignancy, but, nevertheless, I think that patients who show squamous metaplasia should be followed most carefully for the possibility of subsequent development of bladder cancer.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*Clark, T. E., in press.

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BOOK REVIEWS

French's Index of Differential Diagnosis, 8th ed. Edited by Arthur H. Douthwaite, M.D., F.R.C.P. Price, $24.00. Pp. 1111, with 774 illustrations, 216 in color. Baltimore: Williams & Wilkins, 1960.

This famous book, appearing first in 1912, was the result of the colossal effort of Dr. Herbert French of London, England. Dr. French wrote more than half of the book, specialists in fields other than internal medicine contributing the rest. As stated in the Preface to the first edition, "The book is an index in the sense that its articles on the various symptoms are arranged in alphabetical order; at the same time it is a work upon differential diagnosis in that it discusses the methods of distinguishing between the various diseases in which each individual symptom may be observed. Whilst the body of the book thus deals with symptoms, the general index at the end gathers these together under the headings of the various diseases in which they occur. The Editor lays particular stress upon the importance of using these two parts of the book together."

The illustrations, of which 216 are in color, add greatly to the value of the book. The book is not for quick reference in the sense that while a patient is dressing following the physical examination the physician can peruse the article on the symptom in such a short time. The reader must sit down in a quiet place with time to study the subject in question. This he can do before the completion of other diagnostic procedures in the individual case. This volume is unique and one of the most outstanding reference books of this century.

W. M. Y.

The Role of the Physician in Environmental Pediatrics. Carl C. Fischer, M.D. Pp. 122. New York: Landsberger, 1960.

This delightful little book was intended by its author to impress upon practicing physicians the importance of pediatric ecology and the physicians' responsibility in seeking solutions to socio-pediatric problems. It can easily be read in a single, uninterrupted evening and would provide much food for thought.

The subject is one which is often not sufficiently appreciated either by practicing physicians or by medical educators, yet it is of utmost importance in the lives of pediatric patients and their parents. Physicians can no longer confine themselves to "Diseases of Children," but must broaden their interests to include the mental, emotional and social health of their infant and child patients. Doctors should consider it a part of their responsibility to coöperate with workers of the various community agencies in order to provide children with a more healthful environment. By virtue of their training and education, physicians have much to contribute to the total and comprehensive solution of these problems.

The author has had more than 30 years' experience in private pediatric practice, medical college teaching, as well as working directly with community agencies. He discusses such common and practical problems as accident prevention, adoption, school health programs, and the handicapped child. A considerable part of the book is spent discussing adolescent problems and juvenile delinquency. Each section is concluded by the statement of certain concrete actions which physicians can take in dealing with the problems and their prevention.

This book might well be considered a text for the "New Pediatrics" which has been the subject of much discussion in recent pediatric journals. Physical disease in children has been greatly reduced and prevented through advances in infant feeding, immunization, and the use of antibiotics. We must now give more attention to such current problems in our complex society as how best to improve the mental, social, and emotional health of our pediatric patients.

Julius S. Conner, M.D.

Outline of Pathology. John H. Manhold, Jr., D.M.D., M.A., F.A.C.D., and Theodore E. Bolden, D.D.S., M.S., Ph.D. Price $4.75. Pp. 340. Philadelphia: Saunders, 1960.

This is not a stimulating book. It explains nothing; it is not even intended to do so. The authors attempt to give a complete outline of the subject matter of pathology to serve the student as a basis for study and the graduate as a recall instrument. There are no illustrations, and there is no bibliography. The 4,500 entries in the index give an excellent key to the contents. The first 103 pages of the text outline the general pathologic processes. The remaining 185 pages deal with systemic pathology.

The physical make-up of the book promises to make it durable as well as handy. The size (5½ by 7¾ by ¾ inches) makes it easy to handle. Pliable and durable-looking plastic is used in the cover. The high quality glossy pages are substantially sewn together. Dark type, capital letters, and italics are used to accentuate the outline form of the text.

This well-edited outline of pathology is a credit to its authors. It will probably find a welcome spot on the average physician's desk or in his medical bag.

Lois I. Platt, M.D.

(*Continued on page 28*)

in infectious disease[17,22,30,

in arthritis[18,19,20,

in hepatic disease[2,3,4,5,

in malabsorption syndrome[1,2,6,

in degenerative disease[6,7,19,20,

in cardiac disease[23,28,29,38,

in dermatitis[24,

in peptic ulcer[8,21,

in neuroses & psychiatric disorders[25,

in diabetes mellitus[31,32,33,

in alcoholism[9,11,35,37,

in ulcerative colitis[10,14,

in osteoporosis[13,19,

in pancreatitis

in female climacteric[12,

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Book Reviews

(*Continued from page 26*)

Electrical Studies on the Unanesthetized Brain. A Symposium with 49 Participants. Edited by Estelle R. Ramey, Ph.D. and Desmond S. O'Doherty, M.D. Price, $6.00. Pp. 423, with 252 illustrations. New York: Hoeber, 1960.

This book marks the beginning of an era in the correlation of the basic functional neuro-anatomy and neurophysiology with the clinical syndromes.

The book is roughly divided into several sections. The early chapters are devoted to the limbic system and several behavioral mechanisms. These are related to some of the effects of the newer psychopharmacologic agents.

Another interesting chapter deals with the relationships between the lung and brain mechanisms. Some of the chapters are devoted to electrical studies of the basal ganglia and their correlation with other subcortical structures. There are also some very interesting chapters dealing with the amygdaloid region and temporal lobe epilepsy as studied by deep electrode implantations.

Overall, the book covers a rather broad field of neurology and gives a preview of what is to come with short scenes of many areas of future studies. It introduces a new concept of thinking in a positive active sense as in contrast with previous studies utilizing stained tissue and trying to make a retrospective inference of function. Basically, it is interesting to note that very little space was given to description of methods and much more space was devoted to discussion by the authors of their work with the active participation of other conference members. In many instances this free interchange presented some stimulating paths for future studies.

I believe this book is a necessary addition to the library of any student of physiology and particularly of those who are interested in the central nervous system in its many manifestations. It is the hope of the reviewer that this work will proceed and meetings of this type will be presented by researchers building upon this volume.

Francis C. Mayle, Jr., M.D.

Care of the Well Baby, Medical Management of the Child from Birth to 2 Years of Age. Kenneth S. Shepard, M.D. Price (paper), $3.25. Pp. 224, with 31 illustrations. Philadelphia: Lippincott, 1960.

This book might be aptly subtitled, "Spock for the Physician"; it was probably inevitable that we have such a book sooner or later. In the foreword (written by Dr. W. C. Davison) the prime aim is described as, "to answer many of the questions, often unspoken, of mothers who are anxious to do the right thing for their infants." If brought to fruition such a goal would certainly be quite worthwhile. It is questionable, however, whether the author's chatty and superficial, yet dogmatic, style adequately fulfills this purpose.

The intended use of this book might be illustrated by the author's statement (in reference to examining a 4-month-old infant), "Excuse yourself from the presence of the mother and quickly review, 'The Baby at 4 Months.' " While this reviewer does not practice pediatrics in such a fashion, the criticism would probably not be valid if the chapter in question contained any information the (presumably) young physician did not already know or could work out in his own manner for himself. Other such statements, as "The next bit of advice may prevent criminality or juvenile delinquency in the child in later life" (used in reference to providing a play area for the year-old infant!), do not properly belong in a book seriously dedicated to child health.

The early chapters of the book are concerned with a description of the infant's early development and characteristics at selected ages through 2 years, all presented in a far too concise and superficial fashion. The author makes liberal use of data obtained from the writings of Gesell and Ilg, Watson and Lowrey, and Davison's "The Compleat Pediatrician" in this section. Other chapters concern weaning, colic, diaper rash, thumb sucking, sleep patterns, etc.; again, the brief presentation without more serious discussion is a very real handicap.

The second large section contains a group of chapters on such subjects as plastic surgery, circumcision (containing a needless extensive presentation of arguments for and against), minor orthopedic problems, moniliasis, allergy, tongue-tie and others; many of these are written by consultants.

If presented in more detailed fashion, the contents of this book probably would be of use to those to whom the health of children is only one of many interests. As it is, it will probably sell well to medical students and interns who generally welcome such brief reviews. It is hoped, however, that those seriously interested in the young infant will seek the more reliable and complete information in one of the standard textbooks of pediatrics and draw from their own store of good common sense.

J. William Oberman, M.D.

Office Diagnosis. Paul Williamson, M.D., with illustrations by Ann Williamson. Price, $12.50. Pp. 470. Philadelphia: Saunders, 1960.

This instructive book should be of value to medical students, house officers, and general practitioners. The author has taken the more important symptoms of the various systems of the body and discussed the diseases in which they are prominent. His technic is to describe the symptom and then to discuss the diseases involved with the caption, "If You Suspect Such and Such a Disease." There are many descriptive line-drawings done by the author's wife. This reviewer likes the book. It is written in the chatty, simple style of a good teacher.

W. M. Y.

MEDICAL ANNALS
of the District of Columbia

February 1961 VOLUME XXX • NUMBER 2

WASHINGTON HOSPITAL CENTER NUMBER

This is the ninth of a series of special numbers of the Medical Annals, the scientific material for which is supplied by medical institutions and scientific organizations in the Washington Metropolitan Area. For the Washington Hospital Center Number, the Editorial Board is indebted to Dr. Thomas W Mattingly, Director of Medical Education of the Washington Hospital Center, and members of his committee, who secured the papers which appear in this issue. Due to limited space all of the excellent papers could not be published but some of them will appear in subsequent issues during the year.

The Washington Hospital Center

RICHARD M. LOUGHERY
Administrator, Washington Hospital Center, Washington, D. C.

In March, 1961 the Washington Hospital Center will have completed 3 years of operation. From the standpoint of historical background the Center is a fledgling hospital when compared with institutions which can trace their beginning as far back as the early 1800's, even to colonial days.

But few hospitals can match the drama of events which preceded actual construction of the Hospital Center nor the sheer stubbornness and rugged determination of the small group of people who conceived the idea of a Center and overcame frustrating obstacles and almost insurmountable problems to turn their dream into a 778-bed reality.

In effect, the idea of constructing a sizable hospital center in the District came about in the 1940's with a group of dedicated women: Mrs. Millard E. Tydings (the 1960 President of the Women's Division of the Hospital Center), Mrs. Edward W. Fay, and Lady Elisabeth Welsh.

Mrs. Fay, as a member of the Board of Emergency Hospital, and Mrs. Tydings and Lady Welsh, as nurses' aides, were acutely aware of the "inhuman conditions" in hospitals. Armed with the Munger Report of 1945 these women brought the light of publicity on the conditions, which resulted in passage by Congress of Public Law 648 in 1946, a Bill which was introduced and sponsored by Millard E. Tydings, then Senator from Maryland.

Public Law 648 provided a $35 million appropriation to improve several hospitals and authorized the General Services Administration to acquire land and construct a new hospital.

Originally, several hospitals in the District considered merging to form the Hospital Center, but gradually the numbers decreased until only the Central Dispensary and Emergency, Episcopal Eye, Ear and Throat, and Garfield Memorial Hospitals remained.

Members of the Boards of these 3 institutions formed the Hospital Center Corporation and in 1952 signed a contract with GSA agreeing to turn over to the Federal Government the buildings they occupied in return for the deed to the new Center upon its completion.

The first President of the new Board of Trustees was Mr. Charles S. Dewey, who had long been active on the Boards of two of the parent organizations. He had the task of perfecting the merger into a workable organization. This involved a great deal of work with the 3 Boards, the 3 Medical Staffs, and the 3 Women's Auxiliaries in order to obtain a meeting of minds directed toward the common purpose.

The problem of selecting a site for the Center proved to be a difficult one. Many sites were selected and rejected for various reasons. At one time the site of the Naval Observatory on Massachusetts Avenue was considered. However, funds were not appropriated for moving the Navy from that location. In 1950 a 47-acre site was established in the southwest corner of the Soldiers' Home property after a survey revealed this point to be at the center of the population in the Metropolitan Area.

The final planning phase began in July of 1952, when the Active Staff physicians involved in the 3 hospitals were invited to meet and elect committees to represent the needs of the various medical specialties. These committees submitted ideas and rough plans to the Medical Staff Planning Committee, which coördinated and revised the plans to keep the overall requirements within the bounds of available space and money. These ideas were then submitted to the architect for development and execution.

Before final plans were drawn all preliminaries were reviewed and approved by the Medical Staff. Thus, the spaces and functional designs of each medical activity were developed by the physicians who would ultimately be practicing in these same areas.

Construction began in November, 1954, and shortly afterward the equipment and furnishing phase was organized. Again the doctors were called in to work with the Administrators to select and recommend the medical equipment needed.

This utilization of all the medical specialties in the planning often seemed to be a laborious process, but we think that it has produced a highly functional physical plant.

In view of the fact that two-thirds of all hospital costs are devoted to payroll, we attempted to mechanize as far as possible in the areas not involving direct patient care. This resulted in some interesting "firsts" in labor-saving devices, and they have proven most satisfactory.

Recognizing that the hospital would occupy a position of preëminence in the community, just from physical size alone, the Board of Trustees faced some difficult decisions on the subject of the professional educational programs to be included. With the advice of the Medical Staff, which has a substantial representation on the Board of Trustees, it was determined that medical and nursing education must have an important place in the hospital structure if the institution is to fulfill its role as a "Hospital Center" and thus make positive contributions to the health of the community. The present complement of House Officers is 135, and the School of Nursing has a capacity of 288.

It was also determined that one of the precepts of the new organization should be to foster clinical research, and active planning has been carried on to provide facilities and funds for this purpose.

The Hospital Center was dedicated on December 1, 1957, and on March 10, 1958 the first patient was admitted. Twenty months later, in November, 1959, the Center treated its 100,000th patient.

On March 1, 1960 the title to the Hospital Center was transferred from the General Services

Administration to the Washington Hospital Center Corporation, marking the final step of the long-range program that began more than 15 years ago.

The task of integrating the 3 groups of employees into the methods and procedures of the new organization was a most difficult problem. Due to the fact that the parent hospitals were fully operating until a few days before moving, there was little opportunity to introduce these people to the new procedures necessary in the new hospital and even lesss opportunity to introduce these people to each other and their supervisors and department heads. Thus there were many rough edges which required time to overcome. Personnel policies, which varied widely in the 3 merging hospitals, were revised into a new pattern. However, now, after almost 3 years of operation, there is an *esprit de corps* established for the new institution which is so essential for any successful operation.

Today the Hospital Center represents the result of the complete merger of 3 of the District's oldest hospitals and offers treatment for all disease conditions through the combined services of these 3 respected institutions under 1 coördinated operation.

The merger itself attracted the attention of the American Hospital Association, and an extensive story in the *Journal* of this organization pointed out the advantages which can be obtained by combining several clinical and administrative services into one organization. This has attracted the interest of hospitals in other metropolitan areas, and many physicians and administrators have written and personally observed our organization from this viewpoint.

In February, 1960 *Modern Hospital* named the Center as "The Hospital of the Month" for its "design, functional planning, economy of construction and proper provision for hospital needs of the community."

In September of 1960 the Center was one of 24 hospitals selected by the AHA to be visited by the International Hospital Federation which was represented by outstanding physicians and administrators from all over the world.

As a voluntary, nonprofit, community hospital, the Hospital Center is charged with the responsibility of providing the best possible hospital care to all the people of the community. That the Center has been meeting its responsibility to the community is evident from an examination of a few of the statistics of operation.

During an average day at the Hospital Center, activities include: 85 patients admitted; 10 births; 59 surgical operations; 92 emergency patients treated; 130 X-ray examinations; 250 outpatients treated; 500 pharmacy prescriptions filled; 972 laboratory examinations.

But, in addition to meeting its prime responsibility of providing the best in hospital care, the Hospital Center has a strong, beneficial influence on the economy of the community. Employing more than 1,800 professional and nonprofessional personnel, the Center's annual payroll is in excess of 6 million dollars. And the Center promotes the economic well-being of the community with annual purchases for food, telephone service, water, electricity, fuel oil, supplies, etc., of more than 3¾ million dollars.

Lindau's Disease*

Report of an Unusual Case and Two Additional Cases in a Negro Family

LEON SCHECHTERMAN, M.D.†
Northport, Long Island, New York

SINCE LINDAU'S DESCRIPTION[1] in 1926 of a systemic and familial disorder, characterized by cerebellar (less frequently brain-stem and spinal-cord) angiomatosis, associated with a variety of visceral cystic lesions, numerous reports of this entity have appeared in the literature.[2-11] Lindau pointed out the association of angiomatosis retinae von Hippel[12] in some 20 per cent of cases with angioblastomas of the cerebellum. When the retinal lesion is present the composite syndrome is generally referred to as Lindau-von Hippel's disease.

The criteria for the diagnosis of Lindau's disease as set forth by Cushing[13] and by Lindau[1, 14] are as follows: the presence of a cerebellar neoplasm with (a) familial history of angiomatous disorder, and (b) evidence of involvement of other organs as seen in Lindau's complex. Nicol[9] has proposed cerebellar (CNS) angioblastoma or retinal angioma alone, with an inherited history of the disease, or a retinal and cerebellar angioma in the same patient as diagnostic of Lindau's disease. With the exception of an absent retinal lesion, these criteria are fulfilled in the case to be presented.

Some rather unusual features in this case, we believe, justify its detailed presentation. Among these features is the finding of this disease entity in a Negro family, the presence of characteristic features of sickle-cell trait combined with very extensive visceral lesions of Lindau's disease, and finally postmortem confirmation of 2 additional cases of Lindau's disease in this family.

REPORT OF CASE

Case 1. A 47-year-old Negro woman was admitted to Washington Hospital Center in a semi-comatose state at 10:20 p.m. on May 1, 1959, following a period of severe excruciating headache of several hours' duration and diffuse pain in the left side of her body. A family history was not obtained at this time. The patient had been treated for hypertensive cardiovascular disease for a period of 2 years. Neurologic examinations were negative during this period. There had been hematuria in 1955 due to a transitional-cell papilloma. The papilloma was removed, and no evidence of renal disease was uncovered.

On admission the patient was deeply comatose and had Cheyne-Stokes respiration. The blood pressure was 250/140. The right pupil reacted sluggishly to light, and both pupils appeared slightly constricted and equal. A choked disc was seen on the right. The right kidney and the liver were palpable. The extremities were flaccid, with equal and hyperactive reflexes and negative Babinski. A positive Hoffmann of the right hand was noted earlier.

Following the administration of Serpasil intravenously and nasal oxygen the patient's blood pressure dropped to 100/60. A spinal tap revealed grossly bloody spinal fluid. The hemoglobin was 14 Gm. The coma deepened, and the patient died 18 hours after the onset of her present illness.

Autopsy revealed in the abdominal cavity 2 prominent, markedly dilated, serpiginous venous structures, corresponding in position to the ovarian veins. The mesentery displayed dilated venous channels. The left ventricular border of the heart was rounded, and the heart appeared to be enlarged. The myocardium was 0.5 cm. thick in the lateral wall of the right ventricle and 2.2 cm. in the lateral wall of the left ventricle. The endocardium lining the right atrium was grayish and thickened in plaque-like fashion. Grade II atherosclerotic changes were noted in the coronary arteries. The spleen was enlarged, weighing 260 Gm. The capsular surface was smooth. Follicular and trabecular markings appeared indistinct on section (figure 1). The liver weighed 1,100 Gm. The capsular surface was tannish and granular. The cut surface displayed numerous tiny, dull gray, slightly raised areas distributed throughout the liver. The intervening parenchyma was dark brown, with indistinct lobular markings. The pancreas weighed 220 Gm. and was irregularly enlarged. The cut surface revealed numerous, well-delineated, multiple cysts replacing the pancreatic parenchyma. These cysts showed great variation in size. Their linings were thin, grayish-white, and glistening, and they contained clear amber fluid. Both adrenal glands were moderately enlarged. Section demonstrated a small, yellowish, cortical adenoma 0.5 cm. in diameter in the right one. Both adrenal medullae were approximately twice average size, and were dull grayish with red and yellow speckling. The cortices were golden yellow, irregularly narrowed. The right and left kidneys weighed 200 and 240 Gm. respectively. The capsule stripped with ease from the right kidney, except from multiple protruding cysts which ranged from 0.5 to 1.5 cm. in diameter, and which contained clear amber fluid. Similar cysts were found in the left kidney. The capsule stripped with ease from the left kidney, which appeared enlarged, and 4 tumors projected from the external surface. The largest of these was 5 cm. in diameter. They were well encapsulated and yellowish, with hemorrhagic foci.

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* This scientific paper, presented here in condensed form, was awarded first prize in the 1960 Annual Essay Contest for resident staff members of the Washington Hospital Center and was read at the annual Medical Staff Dinner at the Hotel Statler-Hilton, April 16, 1960, in Washington, D. C.

† Formerly Chief Resident in Pathology at the Washington Hospital Center.

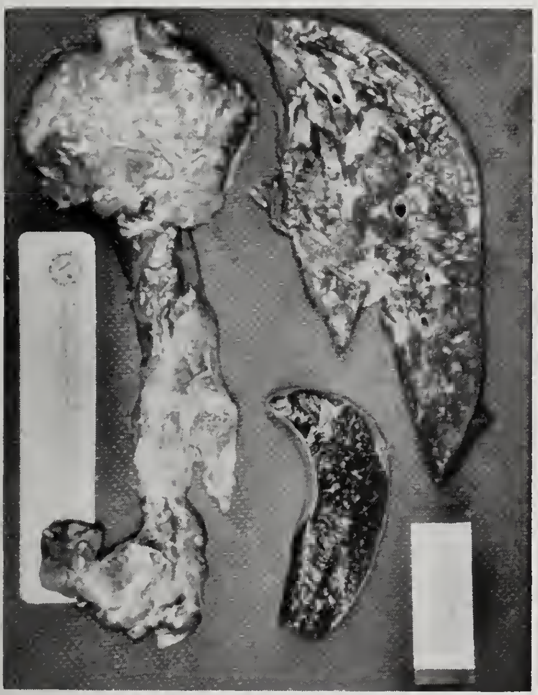


Fig. 1. Case 1. Gross sections of liver, spleen and pancreas. Note extensive replacement of pancreas by multicystic structures.

Microscopic examination showed in the lungs focal aggregates of cavernous, vascular channels adjacent to the bronchioles and pulmonary arterial branches. These channels were surrounded by dense stroma and lined by a single layer of flattened endothelial cells (figure 2). Their contents consisted of pinkish edema fluid. The liver had in the raised yellowish areas focal zones of liver-cell degeneration and congestion. Many sickled erythrocytes and small accumulations of hemosiderin pigment were noted in these areas. Angioma-like structures, similar to those noted in the lung, were found adjacent to the portal triads. In the spleen pooling of

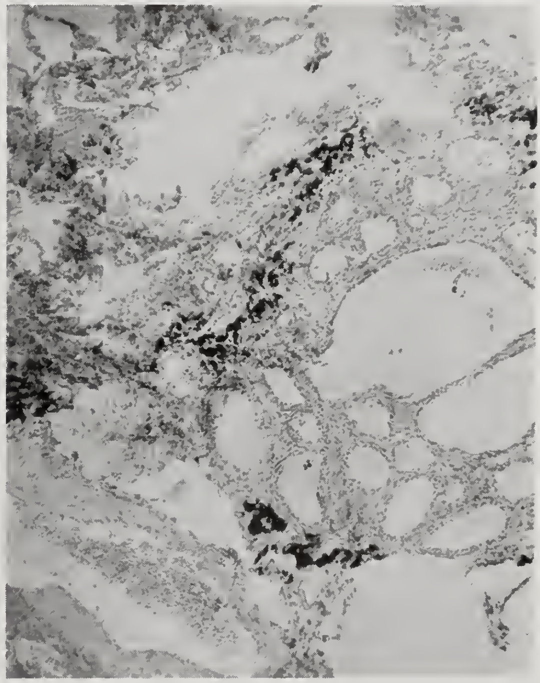


Fig.. 2 Case 1. Angioma-like structures in lung, surrounded by anthracotic pigment.

blood around malpighian follicles in ring-like fashion was noted. Occasional follicles were completely obliterated by hemorrhage. Hemosiderin deposition was prominent. In the pancreas solitary and aggregated multicystic structures were embedded in dense fibrous tissue, surrounded by narrow rims of residual pancreatic tissue (figure 3). The major portion of this organ was replaced by these cysts, which displayed considerable variation in size. They were generally lined by a single layer of low cuboidal or flattened endothelial cells. Occasional papillary excrescences projected into the lumen. The medulla of both adrenal glands was replaced by peculiar loose, vascular, and occasionally myxomatous connective tissue. Cavernous venous channels, lined by flattened endothelial cells and filled with sickle cells, were also present (figure 4). The capillary vessels were surrounded by plump endothelial cells and were separated from areas of closely packed, large clear cells by loose mesenchymal tissue (figure 5). The adrenal cortex was compressed and absent in some areas. Focal areas of necrosis and hemorrhage were found within the medullary tumors.

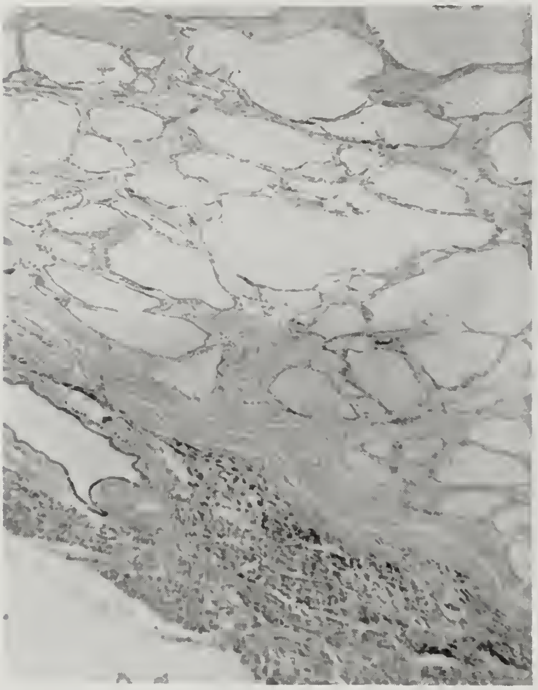


FIG. 3. Case 1. Multicystic structures in pancreas. Normal pancreatic tissue at left.

The cysts of the kidneys were lined by a single layer of low, cuboidal cells. The multiple yellowish tumors consisted principally of broad zones of closely packed, large, round, "clear" cells, occasionally granular, with hyperchromatic, centrally located, small, round nuclei (figure 6). This tissue was heavily vascularized, with hemorrhagic, necrotic zones. These tumors were separated from the compressed renal tissue by dense fibrous capsules. The renal vessels contained numerous sickle cells.

The brain on gross examination showed the dura to be tense and the pia arachnoid congested. It weighed 1,240 Gm. Subarachnoid hemorrhage covered most of both occipital lobes (figure 7). The cerebral arteries displayed occasional atheromata but were otherwise not remarkable. Hemorrhage covered the cerebellar hemispheres posteriorly. Extensive hemorrhage was found within the medulla. The fourth ventricle was filled with blood clot, and only a narrow anterior rim of medullary tissue appeared uninvolved. The hemorrhage extended for a short distance into the pons, and the aqueduct contained blood clot. The major zone of hemorrhage occupied an area measuring 1.4 by 0.7 cm. The lateral ventricles did not appear dilated. Sections of the cerebrum and cerebellum were not remarkable. On microscopic examination sections of the occipital cortex revealed subarachnoid hemorrhage. Numerous sickle cells were in evidence within the meningeal vessels. Sections taken through the medulla and pons revealed extensive replacement of medullary and pontine tissue by large areas of hemorrhage. Some of the hemorrhagic zones were

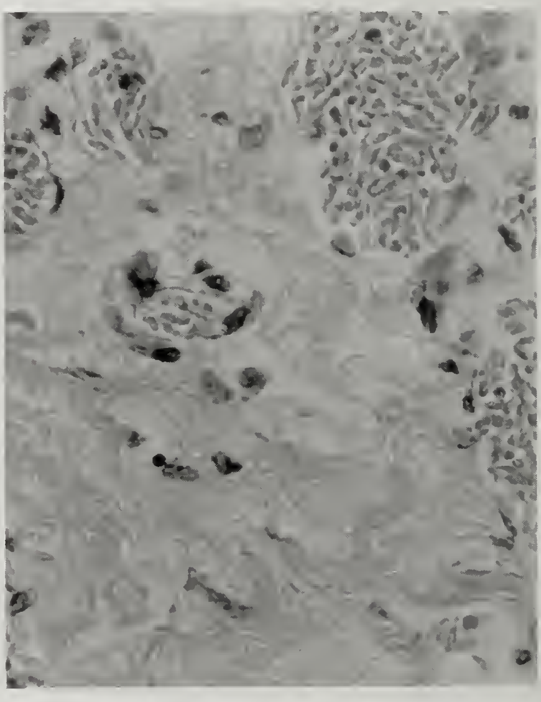


FIG. 4. Case 1. Sickle cells within dilated vascular channels in adrenal tumor.

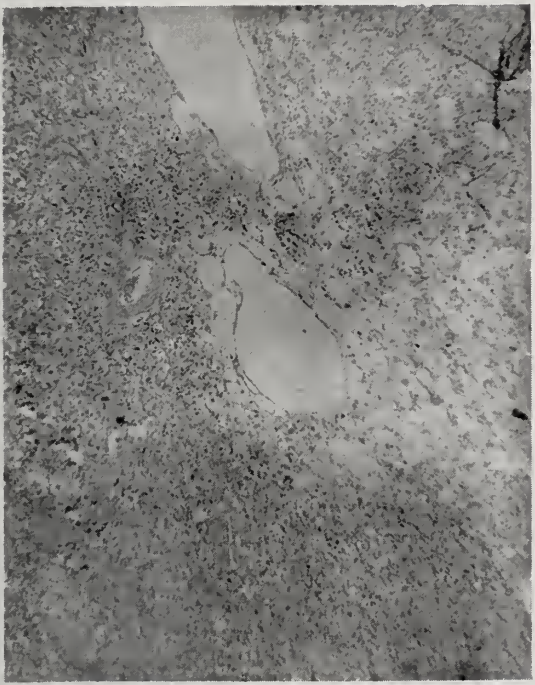


FIG. 5. Case 1. Low-power view of adrenal hemangio-endothelioma, demonstrating capillary channels with occasional cavernous vessels. Endothelial-cell proliferation, upper right, with pseudoxanthoma cells.

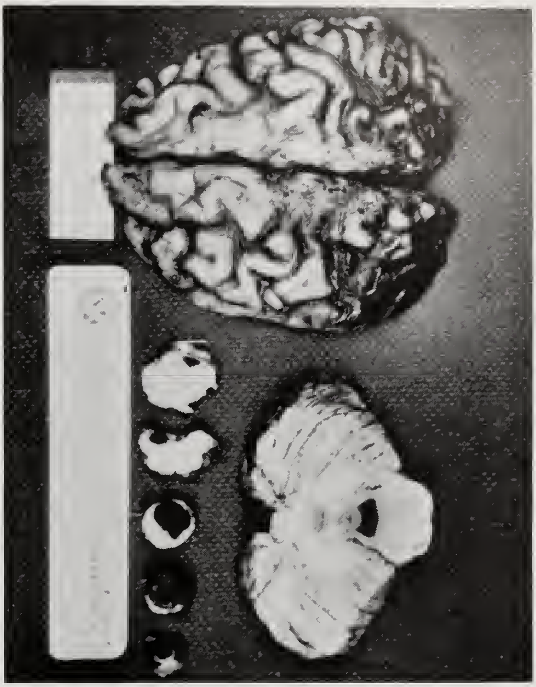


FIG. 7. Case 1. View of convex surface of cerebrum demonstrating occipital subarachnoid hemorrhage. Sections of brain stem reveal extensive intramedullary and intrapontine hemorrhage.

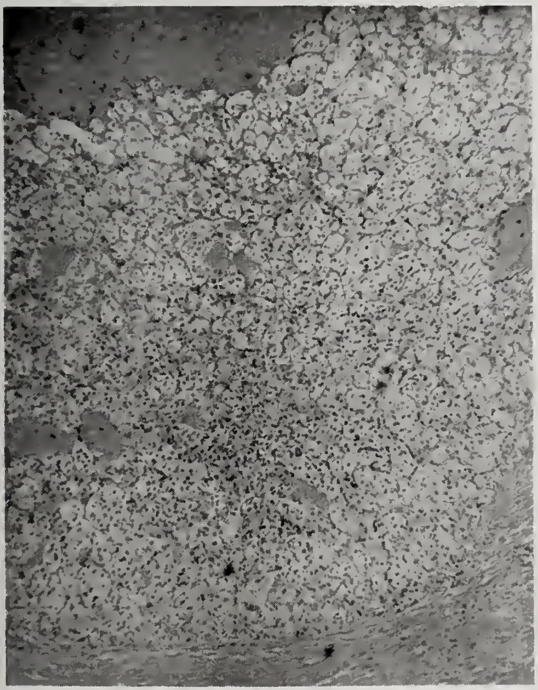


FIG. 6. Case 1. Microscopic section of kidney tumor demonstrating closely packed "clear cells" (fibrous capsule at bottom).

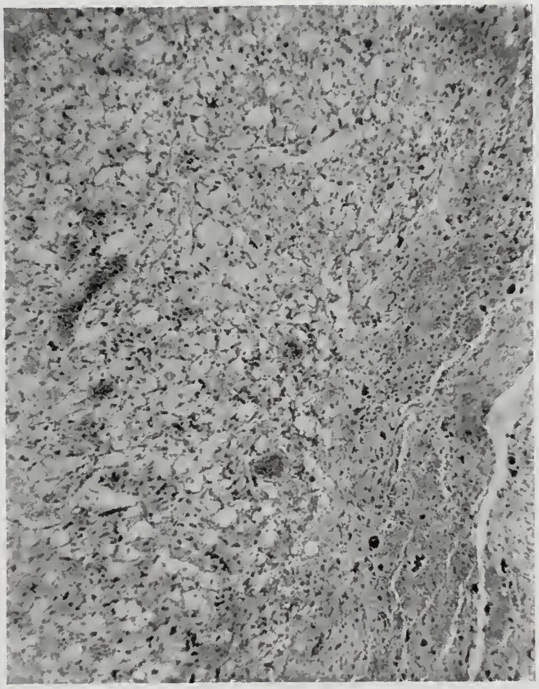


FIG. 8. Case 1. Microscopic view of medulla oblongata demonstrating hemangio-endothelioma, comprised predominantly of "clear cells." Hemorrhage within medulla (at right).

confined within ghost-like outlines of cavernous channels. The medullary architecture appeared almost obliterated. Thick-walled, tortuous vessels were noted, bordering the medulla anteriorly in sections taken in the vicinity of the foramina. Sections from this area revealed large nests of round, clear tumor cells with delicate vesicular cytoplasm (figure 8). Two discrete, poorly circumscribed aggregates of these tumor cells were noted dorsally, separated by a wide zone of hemorrhage. A few thin-walled, cavernous venous channels coursed through these tumor zones and contained numerous sickle cells.

The pathologic diagnoses were:

1. Lindau's disease
   a. Hemangio-endotheliomas, multiple, medulla oblongata and adrenal glands
   b. Angioma-like structures, lungs and liver
   c. Multicystic pancreas
   d. Adenomas, clear-cell type, multiple, left kidney, and cysts, kidney, bilateral
   e. Varicosities, ovarian, bilateral
2. Hemorrhage, intramedullary and intrapontine with extension to the basal cysterna
3. Hypertrophy, left ventricle, heart
4. Fibroelastosis, right atrium, heart
5. Congestion and perifollicular hemorrhages, spleen
6. Cortical adenoma, right adrenal
7. Sickle-cell trait.

INVESTIGATION OF FAMILY

On searching the family history 2 other cases of Lindau's disease were discovered.

Case 2 (daughter of propositus). C. Y., a 15-year-old Negro girl with osteogenesis imperfecta, was admitted to the orthopedic service of D. C. General Hospital. Because of severe headaches, nausea, and drowsiness of approximately 1 month's duration, she was transferred to the neurology service with a presumptive diagnosis of posterior fossa tumor. The headaches began some 4 to 5 weeks prior to admission. They were described as a throbbing in the center of the head associated with pain in both eyes. Occasional diplopia and scotomata occurred. The girl had marked staggering, loss of balance, and what seemed to be true vertigo. Two weeks prior to admission vomiting had begun. The girl was poorly developed. The sclerae displayed a distinct blue tinge. The fundi showed normal vessels and discs. There was ptosis of the right eyelid. Marked ataxia and reeling were present with sway toward the right. The hemoglobin was 90 per cent, the hematocrit 42 per cent, and the white blood cells numbered 5,000.

The neurologic opinion was that the patient had a posterior fossa tumor. Bilateral occipital burr holes were made. The patient suddenly ceased breathing on the operating room table at the completion of the procedure. Sudden death was attributed to herniation of the cerebellar tonsil into the foramen magnum.

Postmortem examination of the brain showed symmetrical dilatation of the lateral ventricles with wide open aqueduct. In the left brachium pontis and cerebellar hemisphere there was a large 4.0 by 3.5 cm. cyst. The shiny lining was accompanied in its outer aspect by a grayish, firm mass which was close to the cerebellar tonsil and measured 3.0 by 2.1 by 1.7 cm. In the right cerebellar hemisphere there were 2 nodules, 1 brown and the size of a pea, and the other somewhat smaller and close to the dentate nucleus. Two nodules were also present in the inferior lobe of the left side.

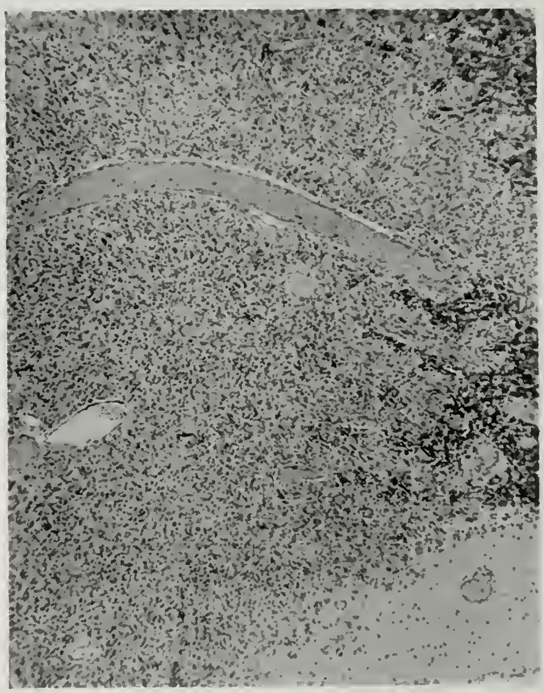


FIG. 9. Case 2. High-power view of cerebellar tumor nodule revealing it to consist of tiny vascular channels surrounded by numerous proliferating endothelial cells.

The diagnosis was multiple hemangiomata of the cerebellum. The angiomas appeared fairly well demarcated microscopically with some displacement of cerebellar tissue and gliosis at the periphery. The nodules were composed of numerous tiny, anastomosing vascular channels surrounded by proliferating, plump endothelial cells. The vascular pattern appeared obscured in many areas by the densely packed cells. Occasional larger cavernous vascular channels coursed the tumor nodules and were lined by a single layer of flattened endothelial cells (figure 9).

Case 3 (brother of propositus). R. J., a 28-year-old Negro man, a paraplegic, was in good health until 1943, approximately 3 years prior to the present admission. At that time he was hospitalized for 10 days because of upper respiratory infection. He noted weakness and pain in the right lower extremity during that period, with similar episodes later in the left lower extremity.

The man subsequently developed difficulty with urination. He was hospitalized several times in the army. The symptoms progressed. A myelogram in February, 1945 revealed a filling defect at D8 to D11. A laminectomy was performed at D9 to L1. The cord was found to be covered by numerous vermiform-like blood vessels. At one point, a pinkish, flesh-colored tumor was found. The patient developed urinary and fecal incontinence postoperatively and spastic paralysis of both legs. During May, 1945 the patient received radiation therapy to the lumbosacral portal with gradual improvement. An angioma of the left retina was discovered and cauterized. In October, 1946 a suprapubic cystotomy was performed.

The man was admitted to the V.A. Hospital in November, 1946. He had generalized muscular atrophy, numerous decubiti, and loss of control of the legs. An eye consultant reported left superior retinal artery to be dilated and constricted in areas like a sausage. The vessels led to a large white area where the angiomatous lesion had been cauterized. There was no evidence of gliosis. The right eye was normal. From December to January, 1947, 1000 r was given. In January, 1947 the patient developed fever of 105 to 106°F. The urine was found to be loaded with white blood cells. An intravenous pyelogram revealed a large left renal calculus with left hydronephrosis. The blood nonprotein nitrogen was 66 mg. High fever, nausea and vomiting developed, and the patient expired in February, 1947.

Autopsy diagnoses were:

1. Hemangioblastomas, multiple, spinal cord and medulla oblongata
2. Hemangioblastoma, cerebellum, right hemisphere
3. Hemangioblastoma, eye, left
4. Hemangioblastoma, pancreas
5. Syringomyelia, spinal cord
6. Bronchopneumonia
7. Pyelonephritis, chronic
8. Nephrolithiasis, left.

Examination of the spinal cord revealed the presence of 3 separate tumor nodules located in the lower thoracic and lumbar regions (figure 10). All were histologically angiomatous tumors. In addition, a 5 mm. lesion was found in the medulla and a 6 mm. solid, reddish-yellow tumor was found in the right cerebellar hemisphere. Histologic examination of the left eye revealed chorioretinal adhesions (following diathermy). There was no evidence of an angioma. The diagnosis of retinal angioblastoma thus remained a clinical one.

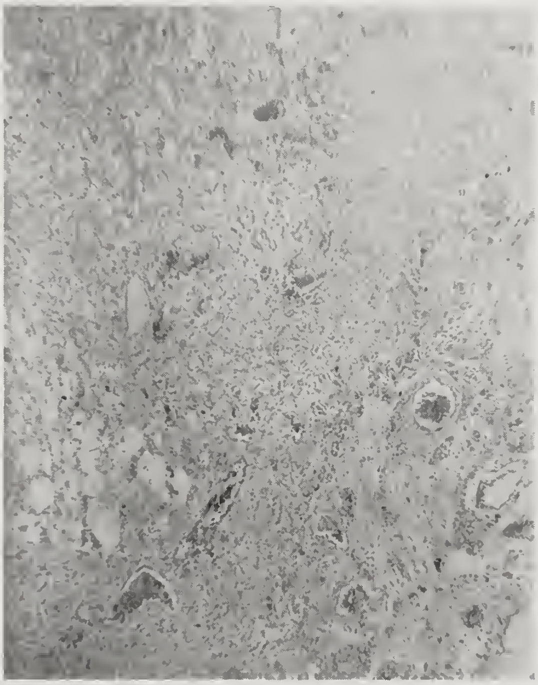


Fig. 10. Case 3. Hemangio-endothelioma, spinal cord, demonstrating capillary structure with larger dilated channels surrounded by swollen endothelial cells and "clear cells."

In tissue slides of the spinal cord the tumors were located, posteriorly and eccentrically, near the posterior septum and were generally well demarcated from compressed cord tissue. The nodules were composed of small, thin-walled vascular channels, frequently anastomosing, separated by plump endothelial cells and nests of larger, round, transparent cells with delicate, vesiculated cytoplasm. Other groups of cells had a more granular, acidophilic cytoplasm. Occasional large, cavernous, vascular channels coursed through these lesions. There were large, elongated areas of cavitation occupying approximately two-thirds of the cross-sectional area of the cord sections. The rim of this cavity displayed some condensation of fibrillar structure and a moderate gliosis.

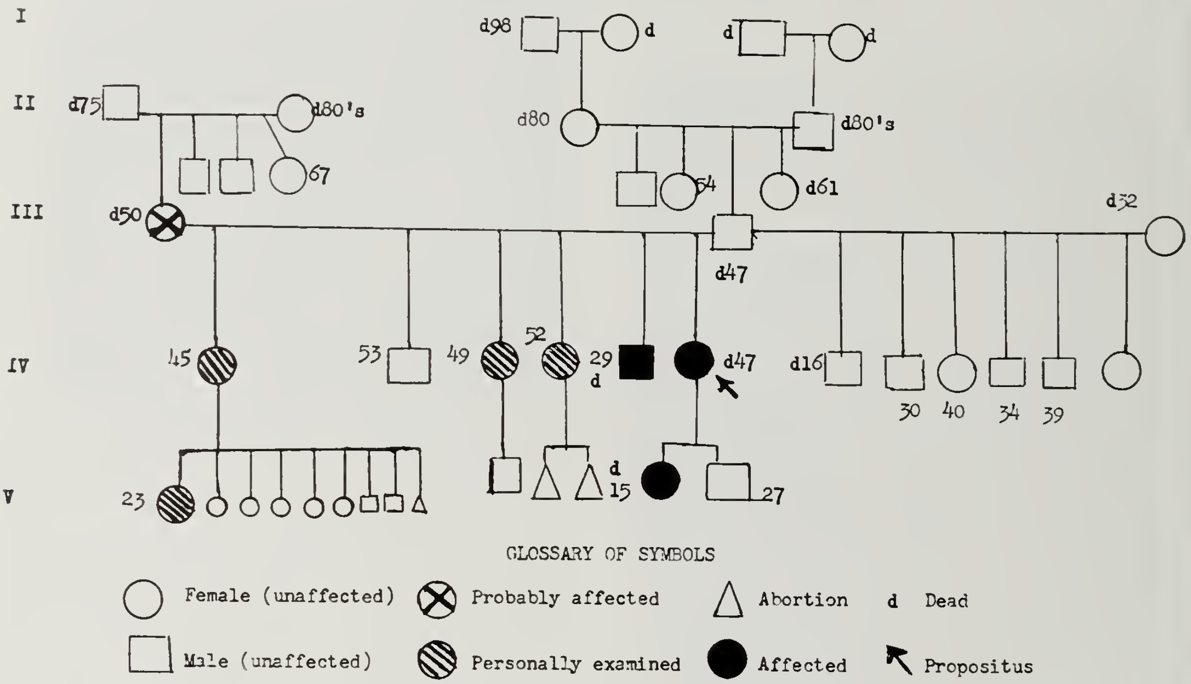
The husband of the propositus, as well as the remaining sibling, a 28-year-old son, are both in apparent good health.

Approximately 25 relatives of the propositus are living locally, with the remainder in South Carolina. The father of the propositus died at the age of 47 from what was designated by the physician in attendance as brain hemorrhage. The mother died in her early thirties in 1918 during an influenza epidemic. She was apparently a complete invalid, totally paralyzed some 2 years prior to her death. No medical records were available in these cases.

Information on the grandparents, as listed in table 1, was essentially negative.

TABLE 1

Pedigree of Lindau's Disease of Family of Patient


I
II
III
IV
V
d98
d
d
d
d75
d80's
67
d80
d80's
54
d61
d50
d47
d52
45
53
49
52
29
d
d47
d16
30
40
34
39
23
d
15
27
GLOSSARY OF SYMBOLS
Female (unaffected)
Probably affected
Abortion
d Dead
Male (unaffected)
Personally examined
Affected
Propositus

A study of the living members of this family was undertaken to discover additional cases of Lindau's disease. At the time of preparation of this paper 4 members of this family had thus far coöperated in these studies. These included 3 sisters and a niece of the propositus. Neurologic and ophthalmologic examinations were negative. In addition, electrophoretic studies revealed only adult-type hemoglobin in these people.

The remainder of the family members listed in table 1 are in apparent good health.

Discussion

The clinical features in case 1 were that of a 47-year-old Negro woman with a cerebrovascular accident. She had been followed at an outpatient clinic for approximately 2 years, where she was treated for symptoms referable to long-standing hypertension. It is perhaps appropriate to point out, at this time, that a family history was never elicited or seriously pursued in this patient, either during her observation at the outpatient clinic or on her admission to the hospital, despite the fact that a daughter and a brother of the patient both had histories of central nervous system tumors. This is not intended as criticism but as reëmphasis on the not infrequent importance of carefully obtained family histories. Despite therapy the patient's blood pressure, both diastolic and systolic, remained elevated. Except for occasional vague complaints of left-sided numbness of upper and lower extremities approximately 2 years prior to the hospital admission, the patient apparently never exhibited any manifestations of disease of the central nervous system.

The location of the hemangio-endotheliomas in the medulla oblongata as part of Lindau's complex is not unusual.[3, 14-17] The site of predilection of these angiomatous lesions when associated with Lindau's complex was long ago pointed out to be the cerebellum.[1, 13, 15] In this location the tumors frequently occur as mural nodules within large cysts. An unusually high incidence of Lindau's complex with hemangio-endotheliomas of the spinal cord, possibly representing a higher incidence than that associated with cerebellar angiomas, has been reported.[18] The multiplicity of hemangio-endotheliomas of the central nervous system appears to be correlated with a higher incidence of Lindau's disease.[5, 11, 18] Unfortunately, in the case under consideration, postmortem examination of the spinal cord and the eyes was not undertaken. No evidence of cerebellar angiomas could be found.

The immediate cause of death in this patient was brain-stem hemorrhage. The extensive intramedullary and intrapontine hemorrhage obscured the angiomatous lesions grossly. Only following microscopic examination of sections of hindbrain were 2 angiomatous lesions found, partially intact, within the medulla oblongata. The major portions of these lesions were destroyed by hemorrhage. Small focal hemorrhages are frequently found in hemangio-endotheliomas. Massive hemorrhages into angiomatous tumors of the posterior fossa have been described.[19, 20] The long-standing hypertensive disease with its recent severe degree is interpreted as the precipitating factor in the brain-stem hemorrhage. The location of the hypertensive encephalopathy within the brain stem in this case presumably resulted from the predisposition of this area, due to the presence of angiomatous tumors. Hemorrhage extended to the pons, fourth ventricle, and basal cysterna.

Precise localization of the angiomatous lesions in the medulla was difficult because of the associated hemorrhage. Bailey[15] and Lindau[14, 21] among others have pointed out that hemangio-endotheliomas of the brain stem appear to originate in the vicinity of the area postrema at the posterior extremity of the fourth ventricle. In the third fetal month a rich capillary plexus is developed here at the same time that the choroidal plexus in the roof of the fourth ventricle is being formed, both apparently derived from a common vascular primordium. It is apparently from this vascular anlage at the area postrema that hemangio-endotheliomas of the hindbrain are developed.

The concomitant existence of sickle-cell trait in this patient is of interest. The diagnosis of sickle-cell trait in this patient rests on the demonstration of sickled erythrocytes within blood vessels in many different organs, coupled with antemortem absence of anemia, jaundice, and evidence of hemolysis. The sickle cells numbered as much as 90 per cent of the red blood cells in many areas. In addition, striking perifollicular pooling of erythrocytes was noted in the spleen. Hemorrhages at the margins of malpighian follicles have been described as characteristic of sicklemia.[22, 23] Electrophoretic confirmation of sickle-cell trait in this case was lacking. The age of the patient, the absence of anemia, signs of hemolysis, and jaundice almost certainly exclude the possibility of sickle-cell disease (S-S disease). S-C disease is not as easily excluded. Pathogenetic relationship of the sickling trait in this case to the cerebrovascular accident seems unlikely. The sickling phenomenon possibly resulted from hypoxic conditions following brain-stem hemorrhage. Sickle cells are frequently found on postmortem examination in patients with sickle-cell trait.[22]

It should be noted that reports have appeared in the literature describing cases of trait associated with fetal cerebrovascular disease.[24, 25] The lesions in these cases appeared to be limited to the cortical veins which were filled with laminated, recent thrombi composed of sickle cells. The resulting occlusions produced confluent destructive cortical hemorrhages. Although sickled red blood cells were noted within cerebral vessels in case 1, no evidence of actual thrombus formation or cortical hemorrhage was found.

The recurrent hematuria in this patient could very likely be attributed to the sickle-cell trait. The bleeding continued following removal of the small bladder papilloma, so that a pathogenetic relationship to that lesion appeared unlikely. The relationship of hematuria, particularly unilateral hematuria, to sickle-cell trait has been stressed by many observers.[26, 27, 28] Mostofi[27] has described renal lesions of sickle-cell trait characterized by the stasis of sickle cells in small medullary and papillary blood vessels with resultant focal hemorrhages. Focal papillary hemorrhages were found within both kidneys in our case. The vessels appeared engorged with sickle cells, and hemosiderin-laden phagocytes were found nearby.

Cysts of the pancreas and kidneys are the most frequently found visceral components of Lindau's complex. The kidney cysts are usually present in approximately two-thirds of the cases, the pancreatic cysts in about one-half.[14, 21] Although exceptions to this observation have been described in the literature, the absence or dearth of symptoms attributable to visceral lesions of Lindau's complex appear to generally hold true. This is perhaps all the more remarkable in case 1, in which extensive, multiorgan involvement was found. Despite considerable replacement and displacement of pancreatic and adrenal tissues no clinical evidence was ever noted of pancreatic or adrenal insufficiency. This would perhaps be additional confirmation of the congenital nature of these lesions and indicative of their limited growth potential. The same supposition would, of course, apply to the brain-stem lesions in this case. Clinical manifestations of brain-stem tumor were of a very vague and limited nature prior to the terminal vascular accident.

It has been postulated that Lindau's complex represents a hereditary but persistent abnormality in which there is a lack of integration between blood vessels and their field of supply.[11] In the phase of fetal development this leads to the formation of cysts and in later life to the development of neoplasms. The embryologic development and vascularization of many of the organs involved in Lindau's complex occur about the third month, similar to the vascular development of the retina and brain stem. Lindau considered the visceral lesions not to be vascular.[14] The adrenal lesions found in this case are undoubtedly angiomatous lesions, apparently histologically similar to the rare, isolated adrenal hemangioblastomas described in the literature.[29] The pancreatic and discrete pulmonary and hepatic lesions remain more enigmatic. They could perhaps be best described as angioma-like structures. The location of the hepatic and pulmonary lesions adjacent to normal vascular structures in the portal triads and near pulmonary arterial branches suggest a common vascular origin. In general, those structures consisted of dilated, thin-walled channels, in which single layers of low cuboidal or flattened endothelial cells rested on delicate fibrous walls. In some areas these channels were filled with red blood cells; however, they usually appeared empty. They most resembled dilated venous channels. Their vascular nature awaits conclusive proof.

The renal adenomas or hypernephromas have been described as less frequent lesions in Lindau's disease. In general, they appear to be benign lesions; infrequent reports of malignant variants with metastasis have been described.[4, 11] A recent report of a case of Lindau's disease describes metastatic renal hypernephroma to a cerebellar hemangioma.[4] The histologic distinction between these lesions can be extremely difficult, particularly when the cerebellar angiomas are comprised principally of the so-called pseudoxanthoma cells or clear cells. This histologic similarity and the appearance of hypernephromas with Lindau's complex pose the interesting possibility of the possible vascular nature or origin of these renal tumors. Despite the presence of multiple clear-cell tumors of the left kidney in case 1 no evidence was found of metastatic disease. These lesions appeared histologically quite similar to clear-cell carcinomas of the kidney.

Numerous cysts of both kidneys were present. These are histologically difficult to distinguish from ordinary retention cysts. They undoubtedly represent visceral malformations similar to the other visceral lesions described. Gibson,[16] in an interesting paper dealing with the interrelationship of renal cysts and tumors, suggests that their frequent association probably represents a causal relationship. The experimental production by means of combined renal tubular and vascular block appears to be clinically reproduced by many renal tumors associated with cystic disease.

No sex predilection has been noted in Lindau's disease, and the manifestation of symptoms related to central nervous system involvement appears to cover a broad age range with an average falling, according to various studies, in the third decade.[1, 9, 14, 30] The 3 patients described in this study ranged from 15 to 50 with the average at 29.6 years.

The occurrence of this disease in a Negro family, judging by an extensive perusal of the literature, is rather unusual. In his review of 40 cases of cerebellar hemangiomas, Silver[31] mentions a single Negro patient, although it is not clear whether this was one of the 9 patients in the study with Lindau's disease. The single, unequivocal reference to a Negro family with Lindau's disease (2 cases) appears in Walsh's textbook.[32] References to race are omitted from studies, so that possibly the incidence is higher in Negroes than is evident at this time.

The familial incidence of Lindau's disease has been estimated at approximately 20 per cent of cases demonstrating the Lindau complex.[14] Sufficient numbers of pedigrees have now been assembled to suggest a mode of inheritance for the Lindau gene. It appears to be an autosomal Mendelian dominant.[10, 33] Silver[10] has estimated penetrance at 80 to 90 per cent, emphasizing the dominance of this trait. Nicol[9] has pointed out that the inheritance of the Lindau factor may proceed through apparently unaffected parents, presumably examples of reduced expressivity of the Lindau gene.

Despite the discovery of only 3 cases thus far in this family, the pedigree suggests an autosomal, dominant mode of inheritance. Despite the negative neurologic and ophthalmologic examinations of 3 sisters and a niece of the propositus, it is clear that Lindau's disease cannot be ruled out in these 4 women.

The parents of the propositus and affected brother are of interest. Medical records, if there were any relative to these people, were unavailable or lost. No clear-cut conclusions can be drawn from the information obtained from the informant. It would appear as though both mother and father were possible Lindau's carriers. The paralyses described in the mother may very well have been manifestations of spinal-cord and/or brain-stem disease, similar to the course described in case 3. A less certain case can be made for the father, who is described as having died quite suddenly of "brain hemorrhage." No additional information was available, other than that he was in apparent good health and sired 12 children by 2 wives prior to his death. No cases of Lindau's disease have appeared in that side of the family derived from the second wife. These members have thus far unfortunately not appeared for examination; they are reportedly generally in good health. This perhaps would tend to favor the mother of the propositus as the probable Lindau in the third generation. It would appear unlikely that this generation was "skipped." When we examine the pedigree, it would appear that if any skipped generation existed in this family it would be in the second or first generations. Both maternal and paternal grandparents were in their seventh and eighth decades at the time of death. This would be unusually old for Lindau's disease.

No history suggesting consanguinity was obtained.

The 2 additional cases described above are of some interest in their own right. Case 2 undoubtedly represented a case of Lindau's disease despite the limited postmortem examination confined to the brain. The appearance of characteristic symptoms of posterior fossa tumor at the age of 15 must certainly be regarded as considerably earlier than usual. The diagnosis of osteogenesis imperfecta is also of some interest. Clinical records pertaining to this diagnosis in the patient's earlier admissions were missing. During the patient's final admission no evidence was noted radiologically of osteogenesis imperfecta. The history of some 15 fractures since the age of 1 and the bluish sclerae strongly suggest the diagnosis of osteogenesis imperfecta. In this case the clinical course would perhaps be most consistent with the variant designated as osteopsathyrosis or osteogenesis imperfecta tarda. This variant, however, in contrast to the congenital variety, is usually familial, inherited as a dominant trait. The various manifestations of this entity, which is a mesenchymal dysplasia, may be found dissociated in different members of a family. No additional cases could be found in this family. The occurrence of this entity, a mesenchymal dysplasia, coupled with Lindau's disease, in essence a mesenchymal dysontogenesis, is of considerable and undoubtedly rare interest. Vascular malformations do not appear to be generally associated with osteogenesis imperfecta. Lindau's disease does not appear to represent a dysplasia, but poor integration between embryonal vascularization and organ development. The simultaneous occurrence of these two entities, both transmitted as dominant traits, is probably to be regarded as coincidental.

The autopsy findings described in case 3 demonstrate an example of extensive involvement of the subtentorial portion of the central nervous system with multiple angiomatous lesions. This widespread angiomatosis, particularly the involvement of the spinal cord, was undoubtedly responsible for the severe paraplegia found in this patient. This case would be more appropriately designated as Lindau-von Hippel disease in view of the fact that a retinal hemangioma was diagnosed clinically. The absence of the lesion at postmortem examination was to be expected, following cauterization. Lindau estimated that approximately 20 per cent of cases of von Hippel's disease (retinal angiomatosis) were associated with cerebellar or brain stem angiomas.[1] Other authors have suggested a somewhat lower incidence.[30, 34] In approximately 35 per cent of cases the retinal lesions are bilateral.[14] The retinal lesions are histologically similar to the central nervous system lesions.[12, 32]

While many of the cerebellar angiomas appear as mural nodules within a cyst, it has been pointed out that spinal cord lesions are always solid.[3] The common association of syringomyelia with these lesions has been a subject of considerable interest and conjecture. The cavitations have been compared to the cyst formation in hemangio-endotheliomas of the cerebellum.[35] These apparently represent true examples of syringomyelia as evidenced in this case by the large cavitation surrounded by a moderate gliosis. No evidence of ependymal lining cells was noted. The syringomyelic cavities, however, do not appear to occur exclusively with angiomatous cord tumors.[35] They have thus been presumed to arise as secondary lesions due to destruction or softening of cord by intramedullary tumors, or possibly by circulatory interference within the cord.[3] The theory, however, has also been advanced that these cavitations are not secondary to the presence of tumors, but represent primary manifestations of a congenital anomaly.[18]

No evidence of sickle-cell trait was found in the 2 additional cases discussed here or in the 4 patients examined. It is assumed the propositus was a sickle-cell trait, the heterozygous A-S genotype. Little information was available regarding her husband except that he was in apparent good health. Assuming he is an A-A homozygous genotype, we might expect half of the siblings to be heterozygous A-S genotypes or having sickle-cell traits. The daughter (case 2), as noted above, demonstrated no evidence of sickle-cell trait, although conclusive confirmation was not available electrophoretically. The remaining (living) sibling is in apparent good health, and information regarding the possibility of sickle-cell trait is not available. A history suggesting sickle-cell anemia was not obtained for the previous generation. It may be assumed that if any of the parents carried the S hemoglobin, it was in the heterozygous state.

In referring to the central nervous system lesions of Lindau's disease described thus far, the terms hemangioblastoma, hemangio-endothelioma, and hemangioma have been used interchangeably. The term hemangioblastoma was introduced by Cushing[13] as an appropriate name for these lesions because of their resemblance histologically to embryonal vascular elements. Cushing thought that the tumor morphologically resembled the various stages that the vasoformative cells passed through during early development. The uniform structure of these tumors, whether in retina, spinal cord, or cerebellum, has been stressed. However, objection to the term hemangioblastoma has been raised because of its tendency to convey a false impression of malignancy.[31] Clinically malignant examples of this type of lesion are extremely rare even when considered as solitary lesions, independent of Lindau's complex.[36] Histologically the lesions rarely suggest even low-grade malignancy. Cushing's interpretation of the origin of these lesions has also been questioned.[31] It has been pointed out that these lesions are in many cases quite similar, even identical to hemangio-endotheliomas elsewhere in the body.[28, 35, 36] Hemangio-endotheliomas are benign vascular neoplasms differing from benign hemangiomas by their marked endothelial proliferation. Hemangio-endothelioma, on a morphologic basis, appears to us to be the most appropriate designation for these neoplasms.

That these lesions are neoplastic appears to be generally accepted. Most observers assign a very limited capacity or degree of neoplasia to these lesions. Silver[31] has pointed to the infrequency of mitotic figures, loose cellular structure, and deposition of hemosiderin and lipids as evidence of the limited capacity of these lesions for proliferation. In addition, he has proposed a histologic classification of these lesions based on the chronologic transition of these neoplasms. Thus the "juvenile" variety predominates in the first 3 decades and is comprised of thin-walled capillaries with few proliferating endothelial cells between vessels. This is followed by the "transitional" variant seen in the middle-age groups, characterized histologically by considerable endothelial hyperplasia and the presence of some large, clear sudanophilic cells, and finally, there is the "clear-cell" type, consisting almost entirely of so-called "pseudoxanthoma" cells, occasional giant cells and cyst formation. This final variety is seen in the old-age groups and is histologically difficult to distinguish from renal hypernephromas.

Review of the cases presented here, with respect to this histologic classification, reveals good correlation. The youngest patient (case 2), 15 years of age, revealed cerebellar lesions that could best be described as "juvenile" types or perhaps early "transitional." The spinal-cord tumors found in the 29-year-old man (case 3) were good examples of "transitional" types. Finally, the medullary lesions seen in the 50-year-old propositus appeared to be of a "clear-cell" type.

This classification has no prognostic import but demonstrates that these lesions are basically capillary hemangiomas which gradually undergo degenerative and proliferative changes. The term "sclerosing hemangioma" has been proposed for these lesions, analogous to the subcutaneous and dermal lesions.[37] We have not been able to demonstrate areas of hematopoiesis in these angiomatous lesions. This has been suggested as the basis for the frequent occurrence of polycythemia with these tumors.[34] Estimates have ranged from 18 to 40 per cent on the number of patients with cerebellar tumors showing a tendency toward polycythemia.[31, 34] The tumors have been almost exclusively hemangio-endotheliomas, either of the solitary variety or those associated with Lindau's complex. The "neurogenic" theory is based on the supposition that the angiomatous tumor produces hydrocephalus resulting in diencephalic dysfunction. This dysfunction finally results in the production of an erythemia.[2] This theory is, of course, difficult to accept because erythemias do not occur with other tumors of the posterior fossa. Ward[38] has suggested that the erythrocytosis seen in angiomatous tumors of the posterior fossa may be secondary to an erythropoietic hormone secreted by these tumors; this awaits verification. Polycythemic tendencies were not found in the group of patients described in this paper.

It should be emphasized that Lindau's disease is a rare entity. Lindau estimated that "angioblastomas" constituted 2 per cent of all intracranial tumors.[21] The Lindau complex is, however, seen in only a small minority of these cases. Russell[18] found 2 examples of Lindau's disease in her collection of 13 cerebellar angiomas, Cramer[34] in 5 out of 53, and Silver[31] in 9 out of 40 cases.

The search for Lindau's disease of possible familial incidence does not constitute an academic exercise. Hemangiomatous cysts of the cerebellum have for some time been considered among the most favorable of all intracranial tumors for surgical removal.[19, 30, 34, 39] Recognition of the not infrequent familial nature of these lesions, in their association with Lindau's complex, provides us with an important clue for possible early diagnosis in an affected family. Diagnosis and surgery might then be undertaken prior to the development of such frequently fatal complications as hemorrhage and hydrocephalus. Improved methods of ventriculography permit more precise preoperative assessment of these lesions.[39] Increasing numbers of reports are appearing describing multiple members of families with Lindau's disease who have undergone successful neurosurgery for cerebellar hemangio-endotheliomas.[7, 9, 30, 39] The investigation of the family described in this paper is, of course, far from complete and will continue. Periodic observation of those already examined will be continued. Statistically, more cases are to be expected in this family. The detection of a single additional case in which surgical removal of a cerebellar lesion was feasible would provide ample reward for any time and effort expended in this study.

SUMMARY

A case of Lindau's disease has been described, confirmed by postmortem examination. Some unusual features in this case have been described and discussed. Two additional cases of Lindau's disease in this family have been described and a genetic analysis of the family considered. The clinical, pathologic and genetic features of Lindau's disease have been discussed in detail.

N.B. The author is indebted to Dr. John McTigue, Washington, D. C., for the ophthalmologic examinations reported in this study.

Grateful acknowledgement is made to D. C. General Hospital and George Washington University Hospital, Washington, D. C., for clinical information and tissue slides in case 2. Grateful acknowledgement is made to the Armed Forces Institute of Pathology for the opportunity of reviewing tissue slides in case 3 in this study.

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Prevention of Habitual Abortion with Estrogens in Patients Failing to Exhibit a Rise in Serum Protein-bound Iodine during Pregnancy*

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A RISE in serum protein-bound iodine (PBI) and thyroxine-binding capacity of serum protein (TBPC) is characteristically observed during the course of pregnancy[1-16] and the administration of estrogens to euthyroid subjects.[15-20] There have been reported[4-7, 9-12, 16, 21] numerous instances in which this characteristic rise in serum PBI and TBPC fails to occur during gestation. These pregnancies have usually ended in abortion. The administration of thyroid extract, in many cases, has raised the serum PBI but has failed to prevent abortion.[7, 21]

The present study reports the successful use of estrogens in effecting a rise in serum PBI and in preventing abortion in patients with habitual abortion who fail to exhibit the expected rise in serum PBI characteristic of pregnancy.

MATERIAL AND METHODS

Eight patients, with histories of 2 to 5 abortions each, were the subjects of this study. They were selected from a group of 41 habitual aborters when they failed to exhibit a rise in serum PBI during the first trimester of pregnancy. No other condition, i.e., adrenogenital syndrome, patulous cervix, uterine myomata, etc., could be found as the cause for their repeated abortions as was the case in the other 33 patients.

Two patients received Stilbestrol, 5 mg. orally 3 times daily, and 6 patients Premarin, 1.25 mg. orally 3 to 4 times daily from the time of the first gestational serum PBI determination until the day before delivery. One patient also received Norlutin, 5 mg. twice daily, from the eighteenth through the twentieth week of gestation.

The method of Zak[22] as modified by Leffler[23] was used for the determinations of the serum PBI concentrations in all patients. All determinations were performed in duplicate, and recoveries were included in each set of analyses. The analytical variability of the results in duplicate samples was usually within 0.4 gamma per 100 ml. of serum.

RESULTS

Contained in table 1 are the complete data and vital statistics on all 8 cases. All patients went to term uneventfully except for 1 (case 3), who had mild vaginal bleeding commencing at the start of the eighteenth week of gestation. She was given Norlutin, 5 mg. twice a day orally, and the bleeding stopped in 3 days. The Norlutin was discontinued after 2 weeks, with no further recurrence of bleeding. The dose of Premarin was raised to 1.25 mg. 4 times daily for the duration of her pregnancy. It is interesting to note that the serum PBI done at 18 weeks' gestation had fallen to 5.3 gamma per cent and had risen to 6.8 gamma per cent by 32 weeks on the increased dose of Premarin.

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TABLE 1

Effect of Estrogens on Serum Protein-bound Iodine in Habitual Aborters during Pregnancy

Case and Age	Abortion	Pregnancy	Prepartum Serum PBI	Intrapartum Serum PBI Weeks					Postpartum Serum PBI Weeks		Result of Pregnancy	Medications
				4*	8	16	24	32	2	16		
1. R. C., 33 yrs.	2	3	4.9	3.8	6.8	7.1	7.4	7.0	5.8	5.2	NFTD†	Premarin 1.25 mg. t.i.d.
2. K. J., 39 yrs.	5	8	5.5	5.7	7.1	7.6	8.8	7.8	6.0	5.2	NFTD	Premarin 1.25 mg. t.i.d.
3. P. M., 25 yrs.	4	5	5.2	4.0	6.4	6.1	5.3	6.8	5.6	5.0	NFTD	Premarin 1.25 mg. t.i.d. raised to q.i.d. at 18 weeks. Norlutin 5 mg. b.i.d. from 18th to 20th weeks
4. M. H., 26 yrs.	3	6	5.6	3.5	6.6	6.8	8.4	7.8	5.2	5.4	NFTD	Premarin 1.25 mg. t.i.d.
5. B. C., 26 yrs.	4	6	6.8	6.6	7.2	7.8	8.4	7.6	7.0	6.4	NFTD	Stilbestrol 5 mg. t.i.d.
6. H. G., 37 yrs.	4	6	4.8	4.4	8.0	8.4	9.0	8.8	6.8	5.0	NFTD	Premarin 1.25 mg. t.i.d.
7. M. C., 31 yrs.	3	6	5.2	5.5	7.0	7.1	6.6	5.1	5.0	4.6	NFTD	Stilbestrol 5 mg. t.i.d.
8. P. D., 35 yrs.	3	5	4.4	4.0	7.2	7.6	7.0	7.2	6.6	4.6	NFTD	Premarin 1.25 mg. t.i.d.

* Therapy with estrogen begun.

† Normal fetus term delivery.

All patients demonstrated a significant rise in serum PBI. The highest value attained was 9.0 gamma per cent. This rise was sustained in all but 2 patients. Patient no. 3 had a fall to 5.3 gamma per cent, as noted above, which rose to 6.8 gamma per cent with increase in dosage of Premarin. Patient no. 7 had a fall from 6.1 gamma per cent to 5.1 gamma per cent 1 month before due date. The dosage of Stilbestrol was not changed, and she carried uneventfully to term.

There was a prompt postpartum fall, in all cases, of the serum PBI to approximately the pregestational values. In cases 1, 6 and 8 the serum PBI values were slightly elevated at 2 weeks postpartum, but these all returned to the pregestational value by 16 weeks postpartum. All the deliveries were uncomplicated and productive of normal infants. There were no evidences of masculinization in any of the women. There were 5 females and 3 males born.

DISCUSSION

Elevation of blood iodine levels during pregnancy has been known for a considerable time.[1, 2, 3] Heinemann et al[4, 5] noted increased levels of serum PBI as early as the third to sixth week of gestation. Serum PBI levels ranged from 6.2 to 11.2 gamma per cent in contrast to 5.6 gamma per cent in normal non-pregnant women. There was no consistent pattern of serum PBI increase.[5] These findings have been confirmed and extended by many investigators.[6-14]

The studies of the changes that occur in serum PBI with normal pregnancy have been extended to abnormal pregnancies. Man et al[7] found that 18 of 26 patients with abortion within the first 16 weeks of gestation had serum PBI levels less than 6.0 gamma per cent.

Russell,[10] in 13 habitual aborters, confirmed this finding. Lum and Man[21] found that the butanol extractable iodine (BEI) was low in 10 of 26 aborters. In this group follow-up studies demonstrated failure of the serum PBI to rise, and there was even a fall during gestation. Several of these women with subsequent successful pregnancies had significant elevations in PBI and BEI. Man et al[7] found in many patients presenting impending signs of abortion that elevation of the serum PBI to normal levels by exogenous thyroid medication did not prevent abortion.

Alterations of certain plasma proteins in pregnancy, in particular an increase in their binding capacity for thyroxine, may contribute to increased levels of circulating hormonal iodine characteristic of pregnancy.[13, 21] Dowling et al[13, 14] and Robbins[20] extended these studies, confirming the increase in TBPC during pregnancy. The alteration began as early as the twentieth postovulatory day, continued to term, and persisted for as long as 6 weeks postpartum. Man et al[24] showed that neonatal serums revealed similar alterations postpartum. Dowling[14] found in 21 of 22 patients with inevitable abortion that the normal gravid increase in TBPC was absent or significantly diminished; in 5 habitually aborting women a diminished TBPC response was noted despite pregnancies that were clinically normal. In Dowling's series administration of estrogen to a small group of euthyroid patients caused an increased TBPC which slowly returned to normal after cessation of therapy.

Estrogen in man causes an increase in the level of serum PBI,[17, 18] an increase in the TBPC of serum,[15, 19] and a decrease in incorporation of radioiodine-labeled tri-iodothyronine by erythrocytes from the plasma.[25] Despite this there is no hyperthyroidism produced clinically; nor is the radioiodine uptake, secretion rate, or basal metabolic rate increased.[15, 18, 21]

Engstrom et al[18] and Dowling et al[13] suggest that the rise in serum PBI during pregnancy and the increased TBPC for thyroxine[13, 14] are secondary to the early increased and sustained elevation of estrogens in the gravid state.

All studies to date indicate that the changes in serum PBI, TBPC, and erythrocyte incorporation of radioiodine-labeled tri-iodothyronine are identical during pregnancy and during the administration of estrogens to euthyroid subjects. Because of this striking similarity the present study was undertaken with the assumption that the failure of serum PBI and TBPC to rise in certain habitual aborters was a manifestation of estrogen rather than thyroxine insufficiency. From this small series, using the serum PBI as an index of sufficiency of estrogen administration, it may be concluded that estrogen has indeed raised the serum PBI to levels characteristic of pregnancy and permitted this small group of habitual aborters to carry to term uneventfully.

SUMMARY

The rise of serum protein-bound iodine (PBI) and thyroxine-binding capacity (TBPC) characteristic of pregnancy does not occur in some patients with habitual abortion. Administration of thyroid extract may raise the serum PBI but does not prevent abortion. Administration of estrogens causes a rise in serum PBI and TBPC exactly as occurs in pregnancy. Accordingly, 8 patients with habitual abortion who failed to have a rise in serum PBI during the first trimester were treated with estrogens. All had a rise in serum PBI and delivered normal full-term infants. The cause for the failure of serum PBI to rise in these patients is considered to be estrogen- rather than thyroxine-deficiency.

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Disgerminoma, a Malignant Tumor, with Seven Collected Cases*†

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THE NAME "DISGERMINOMA" was first given to a specialized and uncommon form of ovarian tumor by Robert Meyer of Berlin.[1] The French called this tumor "seminoma ovarii" because of its histologic and behavioral similarity to the seminoma of the testis which represents over one-half of all testicular neoplasms.

ORIGIN

The dysontogenetic origin of this tumor was explained by Professor Robert Meyer at the 56th Annual Meeting of the American Gynecological Society in Hot Springs, Virginia in May 1931 in the following words: "Such tumors in the sex glands of either sex show in general the same form of histologic structure, excepting the secondary invasion of the seminal tubules in the male. They occur especially in poorly developed sex glands of normal persons, in pseudohermaphrodites, and in ovariotestis. We therefore must conclude that they arise from cells which exist in the embryo before the stage of sex differentiation. It is my belief that they arise from an undifferentiated form of germinal cells which have lost their faculty of becoming either masculine or feminine in type. In other words, these early germinal cells have lost their specific power of sex direction and therefore can develop into identical pathologic structures in both types of sex glands. As these tumors originate from undifferentiated sex cells they necessarily will be void of any specific hormonal influence and thus fail to exert a specific stimulation for development of the secondary sex characters. They neither masculinize nor feminize the individual."

Robert Meyer's terminology, "disgerminoma," and his theory of the origin of this ovarian tumor have been generally accepted since he introduced them in 1931.

INCIDENCE

Disgerminoma of the ovary is a very uncommon tumor, and it would be reasonable to estimate that approximately only 600 cases have been reported. Two fairly recent articles have analyzed all case reports in the world literature. In 1950 Mueller, Topkins and Lapp,[2] of Brooklyn, collected 420 cases from the world literature and added 7 cases from Kings County Hospital. In 1955 Pedowitz, Felmus and Grayzel,[3] also of Brooklyn, found 100 case reports in the literature following the previous report of Mueller, Topkins and Lapp and added 2 cases of their own. Therefore, up to 1955 529 cases had been reported in the world literature.

The incidence of disgerminoma over a 10-year period at Kings County Hospital, in Brooklyn, was reported to be 1.1 per cent of ovarian neoplasms, solid and cystic, and 4.7 per cent of primary ovarian malignancies.[2] Novak[4] of Baltimore stated that disgerminoma was one-third as frequent as granulosa-cell carcinoma which represented 10 per cent of all primary malignant ovarian tumors. While it is rare for pregnancy to be complicated by a solid ovarian tumor, in a review of the literature for 15 years prior to 1950 Dougherty and Lund[5] of New Orleans concluded that 25 per cent of all solid ovarian tumors complicating pregnancy were disgerminomas.

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† Read before the Medical Arts Society in Washington, D. C., March 10, 1960.

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This tumor has been reported in patients from ages 2 to 76. However, 72 per cent of cases have been found in the second and third decades of life and 84 per cent in the second, third, and fourth decades.[2] No racial incidence has been reported.

In the largest reviewed case report Mueller, Topkins and Lapp[2] found the right ovary involved in 50 per cent, the left in 35 per cent, and both in 15 per cent.

During the past 12½ years at the former Garfield Hospital and the Washington Hospital Center 380 ovarian tumors have been accessioned in the Department of Pathology, 29 per cent of which were classified as malignant. Included were 6 disgerminomas, representing 1.57 per cent of the entire series and 5.45 per cent of the malignant ovarian tumors. The first case, herein reported, is from Children's Hospital.

Pathologic Considerations

Tumors of all sizes have been found. One of the largest tumors reported was unilateral in a white girl, aged 13, which measured 25 by 20 cm. and weighed 12 pounds.[2] In another report the patient presented herself with a metastatic nodule in the mandible, and at autopsy the primary ovarian tumor measuring 5 cm. was discovered.[3]

Disgerminoma appears as a gray-white, solid or rubbery, nodular or lobulated tumor with a dense, smooth capsule. The cut surface is grayish pink with a yellowish hue. It may present areas of necrosis, degeneration or hemorrhage.

Microscopically the tumor consists of large, round, ovoid or polyhedral cells with abundant clear, pale-staining cytoplasm and large, centrally located, round, heavily staining nuclei. Mitotic figures may be present but usually are not numerous. These cells are arranged in a solid or columnar pattern, separated by a stroma of fibrous tissue with hyalinization and sometimes lymphocytic infiltration. A diffuse medullary pattern of cells may be seen, and occasionally symplasmatic giant cells are present.

Disgerminoma is not always a pure tumor. Some have been reported to contain other tumor elements, as choriocarcinoma or teratoma, when multiple sections are taken.

Symptoms

There are no characteristic symptoms. The clinical picture may be that of pelvic or abdominal mass, pain, urinary frequency or constipation. In a review of 427 cases Mueller, Topkins and Lapp[2] found torsion of the pedicle in 5 per cent and ascites, clear or hemorrhagic, in 15 per cent of patients.

Most disgerminomas have been found in females with normal sexual development, but a few have been associated with other tumors or diseases of the genital tract, as poor sexual development, gonadal hypoplasia, or pseudohermaphrodism. There is usually no sign of hormonal imbalance. Hormone studies have been done in a number of cases with negative findings in the blood, urine and in tumor tissue.[4] When symptoms of hormonal influence are present, one must suspect a mixed tumor with other tumor elements present in the disgerminoma. There have been reports of a very few such patients presenting precocious puberty, positive pregnancy test, and masculinization with disappearance of these findings after removal of the tumor.[6, 7, 8]

Patients with disgerminoma are not necessarily sterile. A small number of these tumors have been found during pregnancy, a very few have complicated labor, and a very few instances of pregnancy following removal of the disgerminoma have been reported.

Malignancy

Disgerminoma is generally considered to be a malignant tumor. There have been differences of opinion on the degree of malignancy, and it is thought they are less malignant than primary ovarian cancers. Metastasis occurs through blood vessels, lymphatics, extension to adjacent organs, and through seeding from capsular rupture. The most common areas of remote spread are the retroperitoneal and periaortic lymph nodes, lungs, and liver.[2] Other less common areas in which tumor spread has been found include spleen, breast, pancreas, gallbladder, intestinal tract, kidney, adrenal, thymus, heart, vertebrae, skull, mandible, spinal cord, facial and acoustic nerves.[2] The diaphragm was invaded in one of the case reports following.

It has been stated that there is no correlation between the histologic aspects and the degree of malignancy of the tumor, although the usual pathologic criteria for estimating the degree of malignancy are mitosis, disparity in nuclear size and shape, tumor cells in blood and lymphatic vessels, and lack of stroma. It has also been stated that the potentialities of the tumor to recur or metastasize can best be determined at surgery. The prognosis is improved if there is no recurrence or metastasis a year following surgical removal.

The survival rate has been reported in a very wide percentage range and no doubt a number of factors affect the survival and mortality rates. In the two largest reviewed reports with a follow-up of 70 to 75 per cent the same 5-year survival rate was given, namely 27 per cent.[2, 3] In the largest report of 427 collected cases the 15-year survival rate was 4.8 per cent.[2]

The size of the tumor does not necessarily influence prognosis. In one report metastatic disease was noted before the primary ovarian tumor, measuring 5 cm., was discovered.[3] In another report the patient was living 18 years following removal of a 16 cm. disgerminoma.[3]

The 5-year survival rate of patients with intact tumor capsule was reported to be 36 per cent as compared to 12 per cent for those with non-encapsulation or ruptured capsule.[3] Unilateral involvement was reported to show a 5-year survival rate 3 times as great as bilateral involvement.[2] One author reported of the patients conservatively operated on for unilateral encapsulated tumor and having a normal opposite ovary, 36 per cent developed metastatic or primary tumor in the other ovary within 2 years, and most of these appeared within 6 months.[3]

The 5-year survival rate was 40 per cent in patients between ages 15 and 40. It dropped to 18 per cent in those under age 15, and in those over age 40 it was zero.[3]

In patients with clear ascitic fluid the 5-year survival rate was reported to be 33 per cent, and in those with hemorrhagic ascites it was zero.[3] In the largest series of 427 cases, 63 patients had ascites but only 50 were followed and 13 patients lived 5 years or more.[2]

Recurrent or metastatic disease was associated with a 5-year survival of only 10 per cent, and 53 per cent of patients with encapsulated tumors developed recurrence mostly during the first postoperative year.[3]

The duration of symptoms is thought to bear no relationship to the survival rate or prognosis. Patients presenting symptoms of hormonal influence should be suspected of having mixed tumors or disgerminomas containing other tumor elements, as choriocarcinoma or teratoma. Such mixed tumors are quite rare; in 1958 Larson, Dockerty and Pratt[6] of the Mayo Clinic collected 3 cases from the literature and added 1 of tumor mixed with elements of disgerminoma and choriocarcinoma. The mortality rate was 100 per cent. Their 1 patient, a married white woman aged 22, died within 3 months.

The prognosis is more grave if any of the following conditions are present: mitoses, tumor cells in blood or lymph vessels, non-encapsulation of the tumor, bilateral involvement, tumor in prepuberal or postmenopausal age, hemorrhagic ascites, recurrent or metastatic neoplasm, and tumors mixed with elements of choriocarcinoma.

TREATMENT

The methods of treating disgerminoma are surgery and radiation. Intensive and continued male sex hormone therapy was reported in 1 case to have produced regression of multiple and extensive metastases.[2]

Opinions as to the extent of surgery have differed. The conservative viewpoint is the employment of salpingo-oöphorectomy in patients with encapsulated unilateral tumor without evidence of metastasis. This method is used because of a desire to preserve the child-bearing function, and 75 to 80 per cent of cases occur in those years. The removal of all the pelvic regenerative organs is employed in patients with bilateral tumors.

Several of the more recent authors have advocated radical surgery, namely, removal of the uterus, tubes, and ovaries in all cases. At surgery enlarged lymph nodes should be sought and if present they should be removed.

Surgeons who have treated patients with this tumor have had so little personal experience with it that they are unable to decide whether to be conservative or radical. They often do not recognize the true nature of the tumor when confronted with its gross pathology, and frozen section may not be reliable. However, with the growing literature on the subject and several rather recent and comprehensive reviews of the literature, it appears that radical surgery is preferable to conservative operations in all cases.

The following statements are sound reasons for the more radical surgical therapy as opposed to conservative surgery. Disgerminoma is a malignant tumor. The 5-year survival is only 27 per cent and the 15-year survival, 4.8 per cent. Involvement of the contralateral ovary has been reported in 36 per cent of patients with unilateral. encapsulated tumor treated conservatively. Metastatic disease has been reported in 53 per cent of patients with encapsulated tumors. The use of postoperative radiation therapy or the need for secondary surgery for recurrence nullifies the preservation of the child-bearing function which is the principal reason for conservatism. In only a very few instances have patients borne children following conservative surgery for disgerminoma, and some of these patients have later developed recurrence or involvement of the contralateral ovary.

Disgerminoma is a radiosensitive tumor. Pedowitz, Felmus and Grayzel[3] reported a 5-year survival of 17.6 per cent in patients irradiated for recurrence. In those with recurrence who did not receive radiation therapy the 5-year survival was zero. These authors recommend radical surgery, namely, total hysterectomy and bilateral salpingo-oöphorectomy, followed by roentgen therapy in all cases. Definite indications for postoperative X-ray therapy are non-encapsulated tumor, metastasis and recurrence, and positive biopsy of a lymph node at surgery

REPORT OF CASES

Case 1. A Negro girl, aged 9, was first seen upon hospital admission on September 7, 1950. Her family and past histories were irrelevant. She had been under the care of a grandmother in Alabama when she developed intermittent abdominal pain and vomiting on August 26, 1950. Two days later a local physician had diagnosed a large abdominal tumor and recommended surgery. She was transported to her parents in Washington, D. C. There was no history of trauma, and she had not begun to menstruate. On the day of admission she had had severe abdominal, crampy pain causing her to "stoop over," associated with vomiting of green fluid. The pain lasted 15 minutes and recurred intermittently every 1 to 2 hours. Her bowels had not moved for 3 days. There was no dysuria nor genital bleeding.

The temperature, heart rate and respiratory rate were normal. The height was 54.5 inches and the weight 68 lbs. After catheterization the abdomen showed a large, ovoid, symmetrical, firm, tender mass, 10 by 12 cm., extending from the suprapubic area to 3 cm. above the umbilicus and more to the right than to the left side. There was a souffle over the tumor. There was no evidence of ascites. Active peristalsis and a small umbilical hernia were present. On rectal examination the pelvic organs were not identified; the tumor was readily palpated. The urine contained acetone but no growth on culture. The hemoglobin was 9 Gm., the red blood cells numbered 3,700,000 and the white blood cells 12,500, with 87 per cent segmented forms, 5 per cent band forms and 8 per cent lymphocytes. Kahn and Mazzini tests were negative. An X-ray film of the abdomen revealed a soft shadow from the pelvis to the upper border of the fifth lumbar vertebra, not retroperitoneal and without calcification. The diagnosis was twisted right ovarian cyst.

Surgery was performed on September 8 through a right rectus incision. The peritoneal cavity contained 300 c.c. of old and fresh blood. The mass was a large, black, gangrenous tumor of the right ovary with a twisted pedicle. The external surface of the tumor had several small breaks in it. A right salpingo-oöphorectomy was performed. The remaining pelvic organs were normal. A transfusion of 300 c.c. was given.

The pathologic diagnosis was malignant disgerminoma. The tumor measured 12 by 8 cm. and weighed 438 grams. Its capsule was smooth, mottled red and black, and 3 mm. thick. On cut section the upper half of the tumor was firm, rubbery, and mottled red and gray. The lower half was whitish pink, soft, friable, and faintly lobulated.

The patient's course was uncomplicated, and she was discharged from the hospital on September 21, 1950.

She has been seen and examined frequently. She began menstruating in August of 1951 and has continued normally. In July of 1959 her height was 61 inches and her weight 130 lbs. A thorough examination and study in the Hospital in March of 1960 disclosed the patient to be in good condition without recurrence. (Courtesy of Harold Hawfield, M.D.)

Case 2. A white, single girl, aged 15, was admitted to the Hospital on January 23, 1956. At the time of an appendectomy in March of 1953 no note was made indicating that the pelvic organs had been examined. She had had no other illnesses and a normal menstrual history, the last period having been January 7. For 3 months she had complained of sharp, intermittent, nonradiating pain in the lower left quadrant of the abdomen. There were no urinary or other symptoms. The temperature was 99°F, the heart rate 96, the respiratory rate 22, and the blood pressure 110/75. The abdomen revealed tenderness, rebound phenomena, and a questionable hard, tender mass in the suprapubic area. Pelvic examination disclosed a normal uterus and a mass in the left side of the pelvis. The urine contained a trace of acetone. The hemoglobin was 11.9 Gm. and the hematocrit 35 per cent, and the white blood cells numbered 10,900, with 75 per cent segmented forms, 9 per cent band forms, 14 per cent lymphocytes, and 2 per cent monocytes. The diagnosis was incarcerated ovarian cyst.

At surgery on the evening of admission the right ovary was found to be replaced by a bilobulated, smooth, glistening, firm mass approximately 15 inches in diameter and filling the pelvis. A right salpingo-oöphorectomy and partial resection of the left ovary for cystic disease were done. The uterus was normal.

The pathologic diagnosis was disgerminoma. The tumor was 18 by 12 by 8 cm., coarsely nodular, smooth, glistening, and pinkish gray mottled with purplish red areas. The cut surface was nodular, glistening, and pinkish gray with a few 1 cm. areas of soft, friable, yellowish tissue.

The patient's recovery was uneventful and she was discharged from the Hospital on January 29, 1956.

Reëxamination every 6 months has revealed no pathologic change. She was married in 1959, and examination in March 1960 showed her to be 7½ months' pregnant. There was no evidence of recurrence. (Courtesy of William Ferguson, M.D.)

Case 3. A white, single woman, aged 23, employed as a secretary, was admitted to the Hospital on May 27, 1956. Her family and past histories were not contributory. Her menstrual history was normal, with menarche at age 13, and the last period on May 17, 1956. In the previous 2 months she had gained in weight from 132 to 142 lbs. Her chief complaint was progressive, painless edema of the right foot and ankle for 9 days. The edema had progressed so that she could barely put on her right shoe, and for 24 to 36 hours there was edema of both lower extremities. There had been no injury.

The temperature was 99.2°F, the heart rate 86, the respiratory rate 18, and the blood pressure 120/80. A small mass 1.5 by 2 cm. was felt in the left thyroid lobe. The abdomen disclosed a mass extending up from the pelvis into the left flank, 1 to 2 fingerbreadths above the umbilicus, then downward into the right lower quadrant, where there were 2 daughter masses 2 by 3 by 4 cm. attached to the main tumor. There was marked pitting edema of both lower extremities to above the knees. An X-ray film of the chest was negative. X-ray examinations of the abdomen and colon showed a mass arising out of the pelvis and extending cephalad to the fourth lumbar interspace. The mass displaced the sigmoid upward, was intraperitoneal, and was without calcification. A catheterized urinalysis was normal. The hemoglobin was 11.2 Gm. and the hematocrit 33; the white blood cells numbered 7,100, with 61 per cent segmented forms, 8 per cent band forms, 28 per cent lymphocytes, 1 per cent eosinophiles, and 2 per cent monocytes. V.D.R.L. was negative. Total serum protein was 6.36 Gm., with albumin 4.41 and globulin 1.89. The diagnosis was ovarian neoplasm producing partial obstruction of the right femoral vein and left thyroid adenoma. The patient left the Hospital on May 29 and was re-admitted on June 7, 1956. An intravenous pyelogram showed lateral

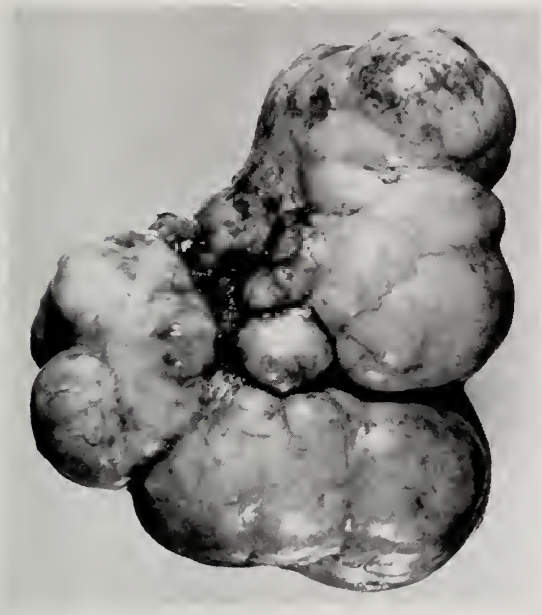

FIG. 1. Case 3. Disgerminoma of left ovary, 22 by 18 by 16 cm.

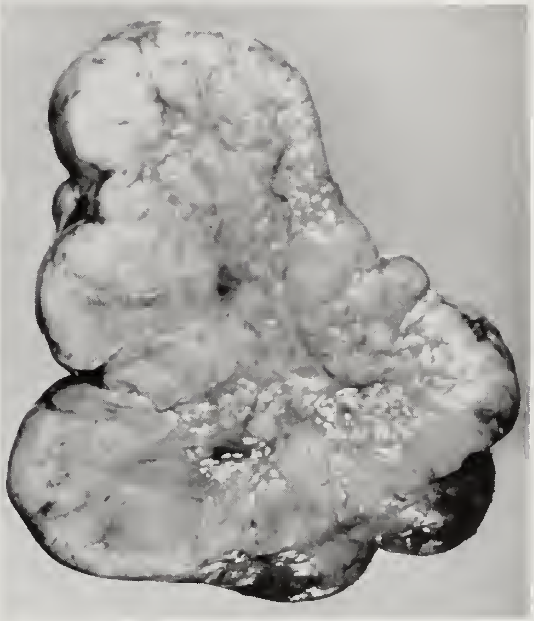

FIG. 2. Case 3. Disgerminoma transected.

displacement of the lower portion of the left ureter but prompt renal excretion with normal calyces and pelves.

Surgery was performed on June 9, 1956. A large, firm, left ovarian tumor 24 by 20 cm. was found with the left tube adherent to the anterior wall of the tumor. The tumor involved the left broad ligament, was attached to the left uterosacral ligament, and was adherent to the anterior wall of the rectosigmoid. The tumor and left tube were removed, except for a small pedicle in the region of the left uterosacral ligament, which was removed separately. An appendectomy was done and a small cyst of the right ovary excised. Abdominal exploration was negative.

The pathologic diagnosis was "disgerminoma, benign, but cannot predict final outcome." The pseudolobulated mass measured 22 by 18 by 16 cm (figures 1, 2 and 3). The capsule was smooth and translucent. The cut surface was firm and pinkish yellow with scattered soft yellow areas up to 2 cm. in diameter.

The postoperative course was smooth. Two blood transfusions were given, and upon discharge from the hospital on June 18, 1956 the hemoglobin was 14.7 Gm. and the hematocrit 43.

One year later this patient was hospitalized from June 2 to June 8, 1957. A left hemithyroidectomy was performed to remove a 7 cm., nontoxic, cystic, benign thyroid nodule in the left lobe. Abdominal, pelvic, and rectal examinations revealed no evidence of recurrence of the previously removed disgerminoma. On last examination in February of 1960 there was no evidence of recurrence. The patient planned to marry a month later. (Courtesy of Ernest A. Gould, M.D.)

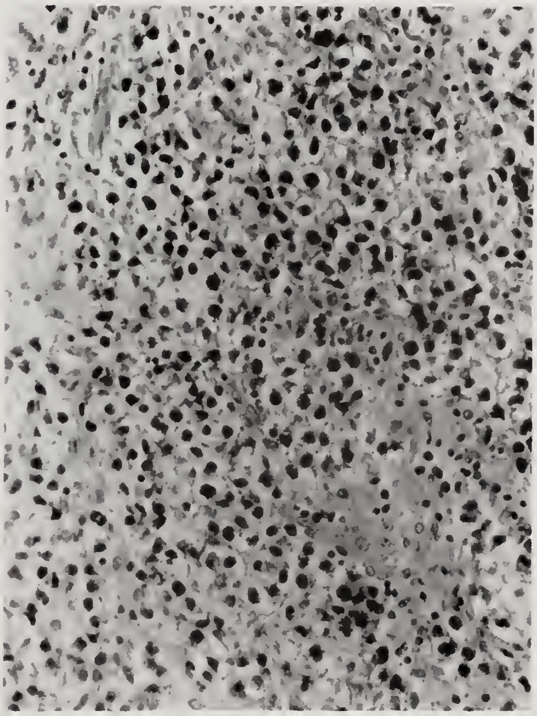

FIG. 3. Case 3. Disgerminoma, high power.

Case 4. A married Negro woman, aged 47, was admitted to the Hospital on August 1, 1956. She had had no former illnesses, and the only surgery had been a tonsillectomy and adenoidectomy. She was grava 3 and para 4 (set of twins) and had had no abortions. She complained of postprandial distress, nausea, and vomiting for 8 months, progressive weakness, and abdominal enlargement for 2 weeks. She had been taking a reducing diet and had lost 35 pounds. Gastrointestinal X-ray examination 6 months before had been reported negative. Examination revealed pallor, ascites, and diffuse uterine enlargement. The temperature was 98.6°F, the heart rate 82, the respiratory rate 20, and the blood pressure 115/75. Abdominal paracentesis recovered 6,300 c.c. of clear, yellow fluid, after which several hard nodules were felt in the pelvic cul-de-sac. The pathology department found no malignant cells in the ascitic fluid. Chest and complete gastrointestinal X-ray examinations were negative. The hemoglobin was 10.5 Gm., and the hematocrit 36; the white blood cells numbered 6,600, with 60 per cent segmented forms, 4 per cent band forms, 32 per cent lymphocytes, 2 per cent eosinophiles, and 2 per cent monocytes. V.D.R.L. was negative. Serum protein was 5.04 Gm., with albumin 3.15 and globulin 1.89. Serum alkaline phosphatase was 4 King-Armstrong units and the bromsulfalein test showed less than 5 per cent dye retention. The diagnosis was metastatic carcinoma, possibly gastric or pancreatic. The patient left the Hospital on August 5 but was re-admitted on August 22, 1956 for only 1 day for another paracentesis, when 4.5 liters of clear, yellow fluid were withdrawn.

The third admission was on August 26, 1956. The patient had a regular and normal menstrual history, her last period having been August 23. Pelvic examination revealed an irregular, nodular, pelvic mass extending one-half way up toward the umbilicus. The diagnosis was ovarian cancer. On August 27 a subtotal hysterectomy and bilateral salpingo-oöphorectomy were performed. The peritoneal cavity contained 4 liters of clear, yellowish fluid. Both ovaries were enlarged to 4 times normal size and were hard, white, and adherent to the infundibulopelvic ligaments. Metastatic nodules were found in the stomach, small intestine, mesentery, omentum, parietal peritoneum, and infundibulopelvic ligaments. The liver contained no nodules.

The pathology report was malignant disgerminoma with blood vessel invasion and metastasis in both tubes. The tubo-ovarian masses each measured 8 by 4 by 4 cm. The uterus measured 9 by 8 by 6.5 cm. and showed adenomyosis.

The course was uneventful and the patient was discharged on September 6, 1956.

From September 14, 1956 to October 31, 1956 she received extensive roentgen therapy. During this time (October 1) another abdominal paracentesis was necessary.

The fourth hospital admission was on December 11, 1956. Abdominal paracentesis recovered 3,500 c.c. of clear, yellowish fluid, and 650 c.c. of similar fluid was withdrawn from a right thoracentesis. It was the opinion that X-ray therapy had produced no beneficial results. The patient left the Hospital on December 15, and death occurred on December 21, 1956. An autopsy was not obtained. (Courtesy of Julius Fogel, M.D.)

Case 5. A white girl, aged 15, was first seen upon hospital admission on November 19, 1956. Her past health was irrelevant, except for her menstrual history. Her menarche occurred at age 13. She had several normal menstrual periods followed by amenorrhea for a year. The menstrual function then resumed very irregularly. She would have several regular monthly periods followed by amenorrhea for several months. She menstruated in June of 1956 and again in September and October.

On October 20 she developed a dull, steady pain in the right lower quadrant of the abdomen unassociated with other symptoms. An enema gave immediate relief. On November 17, 1956 she again developed lower abdominal pain which persisted, was aggravated by motion or change of position, and was associated with nausea and vomiting on 2 occasions.

She was well developed and nourished. The temperature was 99.2°F but had been 101°F in her physician's office; the heart rate was 140 and the blood pressure 110/60. The hemoglobin was 13.6 Gm. and the hematocrit 43; the white blood cells numbered 17,500, with 79 per cent segmented forms, 10 per cent band forms, 10 per cent lymphocytes, and 1 per cent eosinophiles. The lower abdomen appeared full. There were marked tenderness and rigidity across the entire lower abdomen, possibly more pronounced on the right. The external genitalia were normal. Rectal examination disclosed a very tender, doughy mass in the cul-de-sac. The diagnosis was appendiceal abscess.

At surgery on the day of admission the peritoneal cavity was found to contain a large amount of serosanguineous fluid. In the cul-de-sac there was a 17 cm. solid ovarian tumor with a twisted pedicle. The uterus was normal. Both tubes were edematous, the right tube more so, but this was not involved in the twist. The left ovary was elongated or sausage-shaped, white, smooth, enlarged to 10 by 3 cm., and presented a nodular extension 2.5 cm. on a pedicle. The right ovarian tumor was removed, and the mass on the left ovary was excised for biopsy. Pathologic examination showed bilateral malignant disgerminoma.

Three days later, on November 22, 1956, the patient was again operated upon. A total hysterectomy, bilateral salpingectomy, left oöphorectomy, and appendectomy were performed. There was no evidence of metastasis, and there were no enlarged lymph nodes. The ovarian vessels were transected at the pelvic brim. All uterine ligaments and the uterine vessels were divided, more laterally than in the usual hysterectomy; the mass contained a wide vaginal cuff. There was more than the usual blood loss, and 500 c.c. of blood transfusion was administered.

Convalescence was uncomplicated, and the patient left the Hospital on November 30. She returned to school soon after New Year's day, and by January 18, 1957 the vaginal vault was healed.

In February of 1957 she was examined at the National Cancer Institute. The physical examination was within normal limits. The breasts were well developed. She had a normal female escutcheon. The clitoris was not enlarged. The vaginal vault was healed, and there was no evidence of recurrent neoplasm. X-ray films of the chest and pelvis and an intravenous urogram were normal. The hemogram, urinalysis, serum protein, and blood urea nitrogen were normal. The plasma corticoids, urinary corticoids, and 17-ketosteroids were within normal limits.

The patient has been followed closely and was last examined on July 1, 1960. Her weight was 135 lbs. and her height 68½ inches (age 19), and she had successfully completed her first year in college. She has taken 1.25 mg. of Premarin daily and has had no menopausal disturbance. Examination showed her to be in good health with no evidence of recurrence. Her experience has produced no apparent mental or psychologic disturbance. (Case of author.)

Case 6. A married white woman, aged 46, was referred to the radiology department on July 8, 1957 for therapy. She had 3 children. Her chief complaint had been periodic episodes of severe, lower abdominal pain for 18 months and more recently vaginal discharge and bleeding. Examination had disclosed a pelvic mass. At another hospital on June 29, 1957 operation had consisted of total hysterectomy, bilateral salpingo-oöphorectomy, and appendectomy. At surgery the right adnexal mass, which was adherent to the posterior leaf of the broad ligament, was thought to be a moderate hydrosalpinx and cystic ovary. The left ovary was replaced by a 4 by 5 cm. cyst.

The pathology report described the right ovary to measure 5.5 by 3.5 cm.; it consisted mostly of a hard, yellowish-white tumor firmly fixed to the fimbria of the tube. The diagnosis was adenocarcinoma with extension to the tube. The remaining diagnoses were minute fibroids (1 cm.) of the uterus, right hydrosalpinx, normal left tube, follicular cyst (5 cm.) of the left ovary, chronic cervicitis, and normal appendix. Upon review of the pathologic slides a diagnosis of malignant disgerminoma was made.

Between July 8 and August 28, 1957 the patient received 40 X-ray treatments. These consisted of 8,000 r anteriorly and posteriorly over the right and left sides of the pelvis (2,000 r to each of 4 ports).

On October 17, 1957 the patient was asymptomatic, with a weight of 139¼ lbs. and no signs of residual or active disease. In November of 1959 she was well, maintaining her weight, and was without anemia or evidence of recurrence. (Courtesy of Ralph Caulk, M.D.)

Case 7. A married Negro woman, aged 31, was admitted through the emergency room to the Hospital on February 6, 1959. She had 2 children and had had an abortion 6 months previously. The past history was negative. She complained of sudden, sharp, abdominal pain, dizziness, and vaginal bleeding of 2 hours' duration. The menstrual history was normal and regular, the last period being on January 12 and lasting 3 to 4 days.

The temperature was 97.4°F, the heart rate 102, the respiratory rate 20, and the blood pressure 100/60. The mucous membranes were pale, the heart and lungs were normal, and the abdomen was soft, doughy, and slightly distended, with active peristalsis. The cervix was blue and soft. There was slight vaginal bleeding, the uterus felt normal, the left adnexa was large and very tender, and the right adnexa was normal. Rectal examination disclosed exquisite tenderness anteriorly. On culdoscopic tap blood was withdrawn. The hemoglobin was 8.5 Gm. and the hematocrit, 30; the white blood cells numbered 7,700, with 63 per cent segmented forms, 1 per cent band forms, 31 per cent lymphocytes, 1 per cent eosinophiles, and 4 per cent monocytes. A catheterized urinalysis was normal. The diagnosis was ectopic pregnancy.

On the evening of admission a right salpingo-oöphorectomy and appendectomy were performed and a 500 c.c. blood transfusion administered. The operative findings were 3,000 c.c. of clear, yellow ascitic fluid and an orange-sized, right ovarian tumor. The other pelvic organs were normal, and an abdominal exploration was negative.

The pathologic diagnosis was benign disgerminoma. The tumor measured 6 by 6 by 3 cm., had a smooth capsule, was nodular, and on section was pinkish-tan with small areas of hemorrhage.

Additional laboratory studies were done. Serum protein was 7.1 Gm. with albumin 4.3 Gm.; blood urea nitrogen was 5.7 mg.; the hemoglobin was 12.0 Gm. and the hematocrit 40; a chest X-ray film was negative;

and the 17-ketosteroids was 3.8 mg. per 24 hours with a 24-hour volume of 945 ml.

Convalescence was uncomplicated, and the patient was discharged from the Hospital on February 13, 1959.

On March 6 the weight was 104 lbs., the hemoglobin 12.2 Gm., and the hematocrit 40. On April 10, 1959 the weight was 98½ lbs. The last menses was on March 22. Pelvic examination revealed a cystic mass 3 by 4 cm. in the left side, probably a follicular cyst.

This patient was subsequently admitted to another hospital on 3 occasions. During the first admission, from June 25 to July 8, 1959, she had a total hysterectomy, left salpingo-oöphorectomy, total omentectomy, and removal of peritoneal implants. The operative findings were 5,000 c.c. of bloody, ascitic fluid, and disgerminoma of the left ovary with metastatic implants on the peritoneum, liver, and omentum.

During the next hospitalization, from July 20 to October 31, 1959, 7 abdominal paracenteses were performed. The smallest amount of bloody ascitic fluid withdrawn at one tap was 2,500 c.c., and the largest was 7,000 c.c. Thio-Tepa was injected into the peritoneal cavity, and roentgen therapy was administered.

The final hospital admission extended from November 10 until death on December 23, 1959. During this time additional paracenteses were performed. At autopsy metastatic neoplasm was discovered in the abdominal wall, spleen, liver, pancreas, mesentery, diaphragm, and perirenal fat. There were ulcers in the duodenum and colon and erosion of the lower third of the esophagus. (Courtesy of Jerome Cromer, M.D.)

SUMMARY AND CONCLUSIONS

The subject of disgerminoma has been discussed, and 7 cases have been reported.

Five of the 7 patients were young people, and 2 were in the fifth decade. Five patients are living, but only 1 has been followed for over 5 years. The 2 patients who did not survive had small tumors and ascites and died in less than 1 year. Radical surgery was the treatment in 3 patients, 1 of whom died.

Disgerminoma should be considered a malignant ovarian tumor, and the word "benign" should not be used in connection with the pathologic appearance or to describe its behavior.

Removal of all pelvic regenerative organs is the treatment of choice. Roentgen therapy gives beneficial results, and the indications have been enumerated. The use of chemotherapy has not been reported in previous cases, but was used in 1 of the cases herein reported, in which it was of no benefit.

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Contact Lenses[*]

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THERE HAS BEEN an increasing amount of publicity concerning contact lenses in lay magazines and newspapers in recent months. This material is presented primarily for those who are not in ophthalmology in an attempt to answer the questions raised by these articles.

Until about 5 years ago the fitting of contact lenses was almost entirely in the hands of a few highly skilled technicians and was not the concern of many ophthalmologists. Recent developments in the types of lenses available and in fitting technics have vastly increased the number of people wearing contact lenses. With these improvements in technics the many manufacturers of contact lenses have engaged in widespread campaigns to encourage technicians, optometrists, and ophthalmologists to attempt fitting contact lenses. Their literature stresses the ease of the procedure, its safety, and the many satisfied patients wearing contact lenses. There are now estimated to be over 6 million people wearing or attempting to wear contact lenses.[1] In this group we have a new source of potential corneal disease, since very few of them are under medical supervision and some of the nonmedical personnel attempting fitting lenses have no sound background in corneal physiology and pathology. These factors have brought increasing awareness of the many problems concerning contact lenses and, as a result, we have been interested in finding out what things are important in advising our patients about contact lenses, what the criteria for a good fit are, and in seeing to it that the patients have repeated medical examinations to be certain that the integrity of the function of the cornea is maintained while they are wearing contact lenses.

Contact lenses are not new.[2] They were first fitted in 1827 by Sir John Herschel for protecting the cornea from diseased eyelids. He was aware of their optical possibilities but did not develop them. The term "contact lens" was introduced in 1887 by Fick. His lenses were designed for optical purposes, were hand-blown of glass, and were tolerated by wearers for 2 hours or so. Muller developed the idea of making a mold of the patient's eye and then shaping a glass lens in the same way. Saemisch in 1909 improved on these, and some success was obtained in fitting them. The 1930's saw the introduction of such lenses for ordinary refractive errors, with molded glass lenses made primarily by Zeiss and Kollmorgen in Germany. The moldings were first cast in plastic in this country in 1939 by Obrig. These were an improvement over glass lenses in comfort (plastic lenses being much easier to alter) and durability (the glass lenses chipping and shattering easily). The plastic lenses could be tolerated for 6 to 8 hours on an average. They are designed to be worn with solutions—artificial tears in effect or with the patient's own tears circulating under the lens.

This early development concerned lenses of the scleral type which were molded in plastic, fitting over the entire cornea, and resting on the conjunctiva covering the sclera. Scleral lenses are still used, especially for certain medical indications, but fitting them is time-consuming and difficult. The fitting procedure is rather unpleasant, requiring a mold of the patient's cornea and sclera. Adjustments in these lenses are almost always necessary and require considerable technical skill. The lenses are large, uncomfortable from the standpoint of size and weight, and tend to make the wearer's eyes look abnormally large, sometimes glassy and watery and, not infrequently, red and injected. The tolerance for these lenses is thus rather poor. Those requiring artificial tears tend to become cloudy in a short time so that only those patients with great motivation whether from medical need or cosmetic desire will bother to persevere in wearing scleral contact lenses. The small currently more successful corneal contact lens has also been known since the 1890's, having been introduced by Kalt, Muller, and others.[2] They were made in Germany by Zeiss in the 1930's but without much success. In 1948 Toughy improved on the corneal lenses and revived interest in them.[2] Bier in 1955 devised the contour corneal lens,[3] further improving comfort. They are manufactured in plastic under several trade names in this country and abroad.

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Plastic corneal lenses are much smaller in bulk and weight, and the wearer's appearance is normal when the lenses fit properly. Adaptation to these lenses is easier and tolerance for them much greater so that patients are generally able to wear them longer; 50 per cent of corneal contact lens wearers wear their lenses all day. They are easier to adjust, and indeed the initial fit can be so good that no adjustment is necessary in many cases. When adjustment is necessary it can be carried out simply without great technical skill with the aid of semi-automatic tools. These simplified procedures have accounted for the truly incredible increase in the number of corneal contact lenses in the past 5 to 10 years. Well over 90 per cent of the contact lenses worn now are of the corneal type.

Indications

Contact lenses are indicated in several unusual refractive problems such as keratoconus, high degrees of astigmatism, irregular astigmatism, different refractive errors in the eyes, high degrees of nearsightedness or farsightedness, and after cataract extraction when ordinary spectacles cannot give the patient normal, comfortable vision.[3] Contact lenses can compensate for all these conditions and sometimes give such a patient the first really clear vision he has had in his life; and with contacts all of the vision is clear, including the far peripheral vision which is not corrected by the strong glasses necessary in these conditions.

Contact lenses can be prescribed to protect the cornea when the lid margins are diseased or the lashes turn in against the cornea, in certain conjunctival diseases, after reconstructive corneal surgery such as corneal transplants, or after reconstructive conjunctival surgery to restore the shape of the cul-de-sac. Colored contact lenses can be worn in cases in which light is a problem, as in congenital absence of the iris or extreme albinism. Colored lenses can also be used to cover up unsightly corneal scarring which is inoperable.

Medical indications account for only a few of the contact lenses being worn. The vast majority are worn solely from a desire to get rid of glasses. This can be obvious in acting, dancing, and certain sports in which glasses can be a real liability, but most of the desire stems from purely cosmetic and psychologic reasons.

The patient who cannot get along without glasses, even socially, can have a real problem, and this can have considerable effect on his personality, particularly in a young person. Such a person is frequently reported a "changed person" after successful fitting with contact lenses. In those cases in which the patient's refractive error is significant and when his desire to wear contact lenses is great, that is, he is well motivated, contact lenses can be prescribed providing a thorough medical eye examination for any possible ocular disease is negative, and when there is no significant history of allergy. Patients with severe allergy do not do well with contact lenses as a general rule.

Contraindications

Other than allergies, the medical contraindications to contact lenses include excessive tearing, excessive dryness of the eyes, chronic infections of the lids, conjunctiva or cornea, local neoplasms, and certain degenerations of the cornea or conjunctiva.[4]

Selection of Patients

If the medical examination shows no ocular contraindications, the next most important consideration is the patient's motivation. The prospective wearer must have great enough desire to wear lenses to carry him through the unpleasant adaptive phase of being fitted. With this motivation the patient must then benefit enough from the lenses, either visually or cosmetically or both, in order for him to persevere through the adaptation period. During adaptation there is a slow increase in tolerance to the lenses with periods of tearing, red eyes, blinking, inability to open the eyes widely, and peculiar visual symptoms caused by the excessive tearing. The patient must realize in advance that he will have to have the time each day to put aside for this adaptation, since in the early stages these symptoms may prevent any productive activity. He must also be aware of the fact that he will have to insert and remove the lenses himself, and patients have failed in wearing contact lenses solely because they could not bring themselves to insert the lenses even though it is a painless procedure. He must also be prepared to make repeated visits to the office for careful follow-up on the adaptation and on the status of the cornea. All of these factors should be stressed to the patient who is considering wearing contact lenses.

Age is of some importance in the selection of patients. The younger person who has just discovered he cannot go without glasses and who has found certain cosmetic and psychologic disadvantages to glasses accepts contact lenses more readily than an older person. There is no lower age limit to the first fitting with contact lenses, but generally the lenses are not prescribed until sometime during the late teens. The patient who is in his late thirties or in his forties has other factors to consider before choosing contact lenses. He has usually had many years of good service from ordinary glasses and will therefore not accept contact lenses very readily. He is also approaching or at the time when he will be in the bifocal age group. This will mean that only his distance vision can be corrected by contact lenses. For reading, he will still require a pair of glasses to be worn over his contact lenses. This considerably decreases the appeal of contact lenses, since he cannot be rid of glasses entirely. Bifocal contact lenses are being made, but they are not perfected as yet and the rate of successful fitting with them is very low.

The adaptation to contact lenses is good only if the lenses are worn regularly each day for about the same number of hours. Tolerance for the lens is not good when they are worn irregularly as for social occasions only. The older patient will frequently want contacts only for such occasions, but he should be advised that the appearance he wants to improve by removing his glasses will not be good unless he has good tolerance to the lens. Irregular wearers rarely have good adaptation with the result that they tear, squint, blink, have red eyes, and therefore look rather miserable at social functions.

Contact lenses are in fact prosthetics. They correct for a deficiency in the optical set-up as a dental plate or bridge corrects for a dental deficiency. These prosthetics cannot make a perfect physical system out of one that is not perfect. The wearer's vision can be nearly perfect with contacts, but as in a dental plate, even under the best adaptation and adjustment, if he thinks about the lens he will feel it as his lids blink over it. Also, after a completely good fit and with good tolerance there will be occasional days when the lenses will not be comfortable and will not be tolerated. This is particularly true if the wearer is sick even with a cold, but many times the patient has such days for no particular medical reason.

Due to the current fad, too many people are attempting to wear contact lenses. All patients considering contacts should be advised of the factors mentioned above, any one of which may be sufficient reason to advise the patient against attempting them. I personally am convinced that many of these expensive fads are winding up in a dresser drawer after poorly advised patients find that the contact lenses are just too much trouble to bother with.

Effect on Refractive Errors

The claim has been made that the wearing of contact lenses prevents the increase in nearsightedness which is so frequently seen in children and young adults. It is certainly true that contact lenses rarely have to be changed within a 5-year period and also true that while they are being worn they have some molding effect on the cornea, but whether or not this is ever a permanent change has not been proven. No accurate statistical study has been reported to prove or disprove this claim to date.

Summary

Contact lenses of both the scleral and corneal types are generally good prosthetic devices providing a valuable optical and medical aid in ophthalmology. They are safe to wear when the patients are rigidly selected, when the lens fits properly, and when the lens is worn under constant supervision to insure the health of the cornea.

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Trichobezoar with Gastric Ulcers and Bleeding*

Report of a Case

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TRICHOBEZOAR with gastric ulceration complicated by bleeding is not a new problem. The first recorded case of trichobezoar was by Baudamant[1] in 1779. Stelzner[2] in 1896 is believed to be the first to correctly make a preoperative diagnosis of trichobezoar. Schönborn[3] in 1883 described the first published case of surgical removal of a hair-ball from the stomach. The largest, a 6½-pound trichobezoar, was reported by Davies.[4] As reported by DeBakey and Ochsner[5] in their review of the literature, the following facts are informative. Of 142 cases of trichobezoar 80 per cent occurred prior to the age of 30, and 91.4 per cent were females; of these, 9 per cent had some psychic or mental disturbances recorded. This does not seem adequate, since the mere fact of swallowing hair would seem to indicate a mental problem of consequence. In most instances this habit starts in early childhood and continues to the point of producing symptoms from size or erosion or obstructive phenomena. Most prefer their own hair and curl or roll it into a ball prior to swallowing it. In the stomach it seems to form an adherence to that previously ingested and subsequently becomes a part of a firm ball or concretion that generally conforms somewhat to the contour of the stomach.

The word bezoar was found in the writings of Susruta in the twelfth century before Christ. Bezoar stones from goat stomachs are mentioned as powerful remedies. This most likely is the first written reference to bezoar. The word bezoar is probably derived from the Arabian word *badzebir*, which denotes counter poison or antidote.

REPORT OF CASE

Miss E. B. B., aged 20, entered the Washington Hospital Center, March 29, 1960, because of upper gastric discomfort and hematemesis of 3 months' duration. There were mild anemia of 1 year's duration and a recent weight loss of 15 lbs. Her parents had known she was mentally deficient since the age of 1. They were aware of the fact that she had traumatic bald spots on her scalp and on occasions would roll up hair and swallow it.

For the 3 weeks prior to admission ingestion and retention of food had become a problem and the mother had noticed red blood in the vomitus. An upper gastrointestinal X-ray examination revealed a hair-ball (figure 1) and 2 ulcers, 1 on the lesser and 1 on the greater curvature. The patient was transfused in the outpatient clinic and placed on intestinal antibiotics in preparation for surgery. Her preoperative hematocrit was 42.6. Other laboratory tests were within the limits of normal.

The hair-ball (figure 2) was removed through a longitudinal incisional gastrotomy. It was the opinion of the surgeon that the ulcers would probably heal if the foreign body was removed. No bleeding points were seen. The incision was closed, and a Foley catheter gastrostomy was fashioned and brought out through a stab wound in the anterior abdominal wall. This makes an easy way to keep the stomach decompressed in a patient when coöperation might be a problem. The appendix was removed prophylactically. Exploration of the remainder of the abdominal cavity was negative for any additional lesion. Cultures taken from the open stomach following preparation with Neomycin and Mycostatin grew a few diphtheroids, a few gamma hemolytic enterococci and a yeast. The patient did not receive postoperative antibiotics. Her highest postoperative temperature was 101.4°F on the second postoperative day. She went home on the fourth postoperative day with the gastrostomy tube clamped. The gastrointestinal tract was functioning normally at the time of discharge. No blood was needed during surgery, and the gastrostomy tube was removed as an office procedure on the thirteenth postoperative day.

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* From the Department of General Surgery, Washington Hospital Center, Washington, D. C.

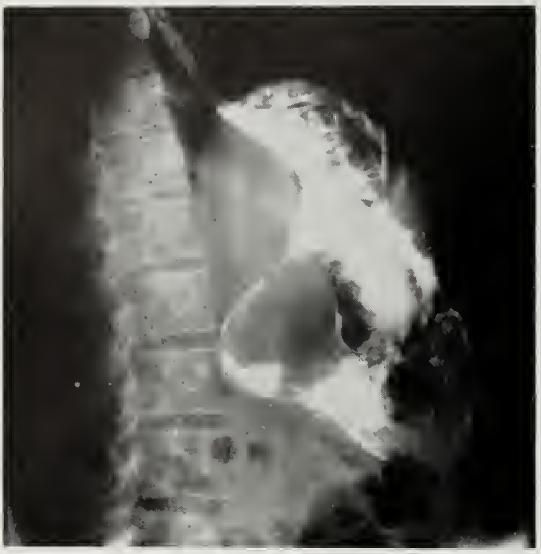

Fig. 1. Preoperative roentgenogram.

The pathologic report recorded a kidney-shaped mass, 12 by 7 by 6 cm., weighing 320 Gm., mottled gray to black, and with numerous black hairs present as a surface appearance. The appendix was normal. A postoperative follow-up X-ray examination after 5 months showed progressive healing of the ulcer craters.

A case of trichobezoar and 2 gastric ulcers with hemorrhage has been presented, and follow-up X-ray examination showed progressive healing of the ulcers. The parents have informed me their daughter is not eating hair now and is quite asymptomatic.

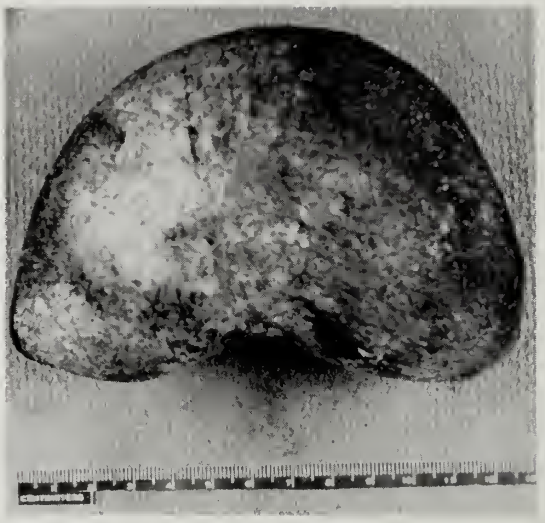

Fig. 2. The trichobezoar.

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PRESIDENT'S PAGE

OUR STRENGTH IS GREAT

One of my first official duties and privileges as President was to meet with our Society's Woman's Auxiliary. This meeting deepened my previously established conviction that here is a source of strength to be used more in the days ahead.

We talked about the White House Conference on Aging as one of the big educational events of the beginning year where controversy and emotion had the advantage of gaining wide study of this paramount problem, although the clouding of reason was notable among violent partisans.

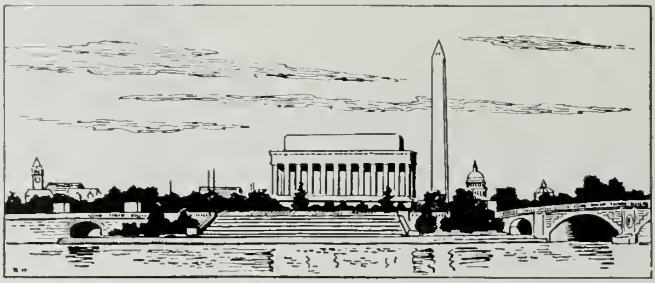
We agreed that this problem might be described as protean and ubiquitous, complex and extensive, because the health care of the aged becomes total care when they are sick, involving food, clothing, shelter, and companionship as well as medical care. And it seems obvious that with the cost of health care alone becoming two or three times as great as for the general population at the very time when incomes are lower, one of the major aspects of the problem is money.

This brings emphasis upon several very important considerations which must not be obscured or neglected in the argument over the exact source of Government-provided funds to aid the total solution. Among these points are the following ones, recognized by our Society as outstanding:

1. The voluntary efforts of 128 million Americans to prepay health care costs must be preserved.
2. The voluntary system itself must be protected from damage due to faulty governmental action and this consideration should be one of the measures of good legislation.
3. The service principle in Blue Cross-Blue Shield, with its stabilizing and guiding influence on the whole voluntary system, must be preserved.
4. The inbuilt subsidy to poor risk and high utilization groups (such as the aged) as a community-rated responsibility in local, nonprofit prepayment must be preserved.
5. The contribution of 4 million of our aged to their own coverage under Blue Cross-Blue Shield programs added to the community-rated subsidy to them is already in being a two-fold, non-governmental source of hundreds of millions of dollars annually toward their health care.

All of these considerations are as well understood by our wives as by ourselves, which makes it appropriate at this time in counting our Society's strength to count it high. And for this community it is good news that their doctors do understand the public service ideal to which they are dedicated.

Donald Stubbs



EDITORIALS

EDUCATION AND THE COMMUNITY HOSPITAL

The role of the community hospital should be that of a teaching hospital. Any hospital has two functions: first and foremost, to give its patients the best possible care, and, second, to serve as the center for the continuing education of its physicians, nurses, and even the community. Only through success in the latter can the first be fully served. Since 3 out of 4 hospitalized patients go to community hospitals, each such hospital must generate and maintain its own academic environment.

The non-university hospital must come to grips with this problem. The most flagrant example of a hospital's failure in its educational function is in many community hospitals where house-officerships are offered. Too often two great deficiencies exist: first, the internship and residency that is only an excuse for getting service from young physicians, and, second, a double standard of performance, one for the house officer and quite another for the referring physician.

Since a hospital is no better than its staff, its effectiveness as a teaching institution depends on its staff. If the interns are inadequate, the probabilities are that the attending staff are inadequate. In those hospitals where there is a highly motivated staff, one dedicated to the task of "keeping up," the house officers are usually good. The physician who deplores the house staff of his hospital should reflect upon whom he is passing judgment.

How is a teaching staff to be developed? The tone of each department should be established by the chief of that department. From the *Bulletin of the American College of Surgeons* comes a substantial answer: "Adequate organization of the medical staff presupposes careful selection of the head of the department and of the chiefs of the various services. In addition to their qualifications in the specialty they should have high professional standing and possess the attribute of the teacher." Being responsible for the training of residents, chiefs should be chosen on the basis of ability, aptitude and interest. All too often the head of a department, or section, has acquired the position because of seniority, politics or other factors, and the prime requisite of the chief as the 'professor' of his section is neglected. Certainly, the department head who is not primarily concerned with the continuing education of his staff is not fulfilling one of his primary responsibilities.

Members of the attending staff should be carefully selected by the chief of service. They should be men who are deeply interested in their own continuing education. Nothing is less rewarding to a house officer (or a patient!) than a physician who is an inadequate practitioner or who is inept or disinterested as a teacher. Nothing is less rewarding to a hospital than a physician who is "too busy" to write adequate records, get postmortems, or keep up with cur-

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia

rent medical advances. The problem of creating an atmosphere of medical excellence is the problem of the entire hospital staff. The machinery for maintaining high standards is spelled out by the Joint Commission on Accreditation of Hospitals. The record committee, tissue committee, and other policing bodies of the staff are only as good as their membership. If committee membership is composed of men who do not understand the purpose of such work and who are devoted to the status quo of mediocrity, certainly the hospital will not develop a strong program for continuing education. One can not separate practice from preachment.

The coördination of the continuing educational program must be the responsibility of a carefully chosen committee. By attention to the quality of conferences and rounds, patient care must improve, and the physicians of the hospital will continue their professional growth. There is no reason why "Grand Rounds" in a community hospital should be pedestrian in presentation and content. There is no reason why "Grand Rounds" in a community hospital cannot be of university caliber. Conferences are the marrow of continuing education after medical school. The aplasia of the community hospital is responsive to treatment.

Every one from the Chairman of the Board of Trustees to the physician with newly won courtesy privileges must understand what it means to be a member of a teaching hospital. If the physician accepts his hospital as an institute for continuing education after medical school, the staff will be of high caliber. Privileges in such a hospital become an honor. A hospital with these standards does not pander to poor medicine or to "specialists" and their "feeders." A hospital with these high standards contributes to the patient, the physician, and the community.

RICHARD F. MANEGOLD, M.D.
Educational Director,
Sibley Memorial Hospital

MEETING THE NEEDS OF THE YOUNG DOCTOR

Compared to past years the present-day Medical Society has a changed status. Formerly a prime function was the education of its members. Weekly or monthly meetings reviewed old topics and introduced new treatments. A short business meeting informed the members concerning current problems. Since World War II a gradual change has occurred. The Joint Commission on Accreditation—saint or ogre, according to one's view—appeared on the scene. One direct effect is that the former optional hospital educational meeting is now a required session. If a physician is ambitious and on the staff of more than one hospital his required meetings are increased in direct proportion. The final step has come with the introduction of postgraduate medical educational programs in the hospital. This function renders obsolete the teaching function of the Medical Society, as it formerly existed.

In this complicated system of education one facet has been overlooked—the attempt of the young doctor to establish a practice. Suddenly, one day in July, the lordly chief resident becomes a man without a position. With some apprehension he realizes for the first time in his life that he is truly on his own. Gone is the fascinating intellectual pursuit of F.U.O. The search now is for a place in the world. The Medical Society is admirably suited to aid the fledgling practitioner.

During the first half of each calendar year the Medical Society can present organized lectures on medical practice. As part of this program, the young surgeon would be counseled by another surgeon. The latter should not have been in practice for more than 5 years, for success dims the remembrance of early struggles. Since the referring physician is so important to the new surgeon, advice concerning referral and consultative relationships is essential. The mechanics necessary to acquire hospital privileges, current fees in the community, the relationship to the patient's family, all make ready topics. Advice concerning location of office, time of office hours, selection of help and their salaries is also necessary.

At the conclusion of this course a one-day convention could be held. Those who render adjunct services could be invited to meet the new physician. Drug retail men could state how they might help. The surgical supply houses could show their wares and advise concerning terms. Furniture firms might display their products and show model offices. In one day it would be possible for the young doctor to compare and measure various services.

The Medical Society can perform its greatest service in actually financing some physicians during their first year in practice. At the conclusion of his extensive training the doctor is a man of dignity and stature. In order to practice the healing art he should not have to beg the means from a bank or relative. Equally important, he should not have to accept a menial position to provide essential needs for his family. The early years should be noted by an ardor and devotion to his art; all too often they are hectic and marred by severe financial strain. The Medical Society has an obligation to aid its new members and to loan money where needed. Initially, the money could be raised by a levy of $10 per member. Annual contributions to the fund would be $2 to $5 per person until the fund is solvent. The loans could range from $1,000 to $2,500. The rate of interest should be low, and the term of the note might be from 1 to 3 years. From a strictly business standpoint the risk is small. Rarely would a physician be unable to repay such a loan. By such a maneuver the Medical Society could materially aid the new member to maintain his stature in the community.

George William Ware, M.D.

PREVENTIVE MEDICINE FOR THE AGED

For a number of weeks all of us have been reading in the daily papers and elsewhere news about the White House Conference on Aging. It seems that virtually the only issue presented to the public has been the controversy over Government payment under the Social Security plan for medical care for the aged versus private or voluntary health insurance. I will not bore you with either aspect of the argument.

Physicians since time immemorial have treated patients for a fee, for a partial fee, or without charge. And the treatment of patients in all three categories by the private practicing physician has been equal.

In the present discussions about medical care for the aged it seems that all concerned are treading upon the "hot coals" of the cost and who shall pay for medical care of the aged, and all groups have overlooked the most important factor, disease prevention in the aged.

Perhaps the most important factor in disease prevention in the aged (excluding accidents) is proper nutrition. Medical experience and literature prove decidedly that faulty nutrition in the older person may be extremely subtle in cause and effect. In twenty years of practice as a family doctor, from pediatrics to geriatrics, I have noted that our aged people with a fixed Social Security income or other small annuity or retirement income have but one way to keep their costs of living within their financial means —not by eliminating the occasional doctor, hospital, or clinic visit, but by diminishing their daily and necessary food intake. There are no free or part-payment food clinics, nor will the grocer or milkman sell products to them at reduced prices because these aged persons are retired and on smaller incomes.

These older patients begin very insidiously to diminish their diet. They skip the egg and bacon, or milk and cereal, for breakfast and substitute a piece of dry toast with a cup of coffee. Soon they omit lunch and eat a very poorly balanced dinner; in a few months their bodies are in nutritional imbalance.

It is well documented in the annals of medical literature that the lack of or lessened amounts of the necessary vitamins, minerals, and proteins will hasten the aging process and help produce diseases of the kidney, liver, intestines, blood vessels, heart and brain.

Our Government has vast amounts of foodstuffs, such as wheat, eggs, milk and butter, and only the Lord knows what else, stored in various sections of this country. These foods could be made available to our aged population, and, in fact, to all of our undernourished, through the use of food stamps. The giving of these foodstuffs would not be charity since our elder citizens have already paid for them with their income taxes of past years.

Proper nutrition is but one aspect of preventive medicine in the aged. A second and important one is the routine checkup of our older citizens. Or will they have to be ill beyond cure or ready for the hospital or mortician before the sponsored program will care for them? And will they have the usual red tape in the form of 6 or 8 forms to fill out before they can be treated? Or will the busy doctor be saddled with this paper work?

We have a new, vigorous, and highly intelligent group of young people entering our administration. They certainly should be able to dispose properly of these stored foodstuffs, so rich in protein, vitamins and other necessary nutrients, to our aged population. We also look to them to develop a medical care plan for the aged which will be satisfactory to all concerned. I understand there is nothing a Harvard man can't do.

I. P. F.

WOMAN'S AUXILIARY NOTES

Members of the Woman's Auxiliary to the Medical Society of the District of Columbia very much enjoyed being hostesses to the visiting wives of the physicians who attended the Clinical Meeting of the American Medical Association. A hospitality room at the Sheraton-Park was open on November 28 and 29 for tea, coffee, and conversation. Mrs. J. Blaine Harrell and her committee had arranged sightseeing tours around Washington and a luncheon at Hogate's Restaurant.

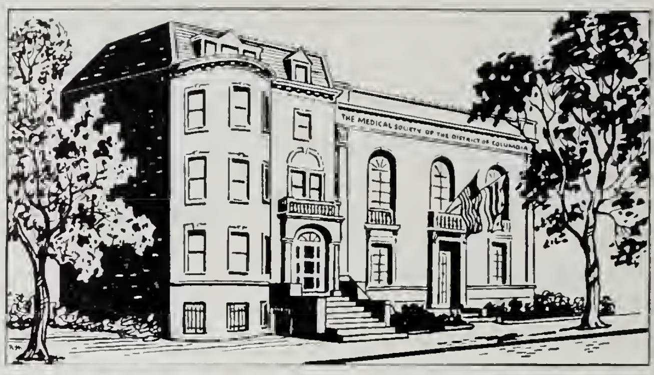
On December 14 the Auxiliary held its annual tea to honor the scholarship nurses and the new members. There are currently 11 scholarship students enrolled in the local schools of nursing. At Sibley there are Joan Thompson Harbin, in her third year; Ruth Anstine and Louise Ann Harris, second-year students, and Jean Halsey, a freshman. The Washington Hospital Center has 5 of our students; they are Mary Hasson, Marilyn Leitzman, and Patricia Kitchin, in their second year, and Connie Nicodemus and Mary Hoke, who are first-year students. Maureen McMahon is a fourth-year student at Catholic University School of Nursing, and Edna Downs is a second-year student at the Capital City School of Nursing of D. C. General Hospital.

We are delighted to welcome our new members: Mmes. Richard Lukes, Louis A. Craig, John B. MacGregor, and William Seward.

Mrs. Jack Kleh, Chairman of the American Medical Educational Fund Committee, urges all Auxiliary members to remind their husbands that contributions to medical schools may go through this fund by merely designating the school of their choice.

Mrs. Tom Edison, Program Chairman, arranged for Dr. Donald Stubbs, President of the Medical Society of the District of Columbia, to speak to us at the January meeting. Dr. Stubbs, who attended the White House Conference on Aging as a member of the National Advisory Committee, discussed "Problems of the Aged." A luncheon followed the meeting.

Mrs. John W. McTigue
Publicity Chairman


THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

IN & OUT OF FOCUS

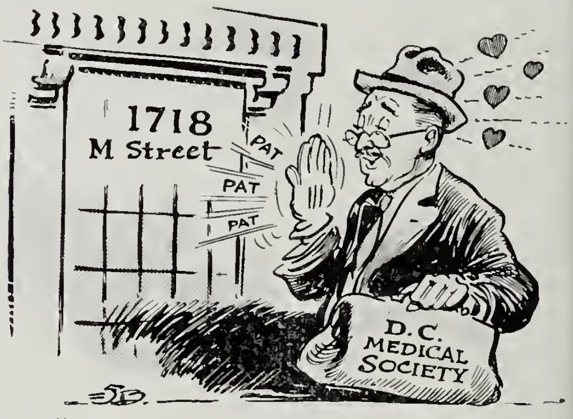
By the Observer

Looking to the Future Least known to the Society's membership are the important responsibilities of the Society's House Committee. It should be of interest that the Constitution and By-laws provides that the Committee "shall have general supervision of the Society's property; it shall recommend any improvements, extensive repairs or changes in the property. It shall likewise prescribe such rules and regulations as may be indicated for the proper maintenance and management of the Society's property."

The Society's original building, as most members know, is situated at 1718 M Street, N.W. It was erected in 1920 and is therefore more than 40 years old. Nevertheless, it is in surprisingly good condition. Planned by one of Washington's leading architects, it stands today as one of the city's attractive edifices. Its auditorium and library are still much admired.

The adjoining building at 1710 M Street, N.W. houses offices of the Society, the Medical Bureau quarters, and meeting rooms. In addition, there are a limited number of efficiency apartments. This building was virtually rebuilt a few years ago and is generally in good condition. Although, basically, it is not comparable to the original building, it should serve the Society's needs for many years to come.

Maintaining these buildings and other "housekeeping" chores, although time-consuming, are not matters of most concern to the Committee at the present time. A matter recently under consideration is of far greater moment. In view of the growing congestion in the area and the increased value of the land on which the Society's buildings are situated, the question has arisen. is this the opportune time to recommend disposal of the property and to seek a new and more desirable location, or should consideration be given to the purchase of the adjacent property on the corner of 17th and M Streets, N.W. which is now for sale for well over a half-million dollars?



"You're all mine!...I won't leave you!"

If the latter course were pursued, it has been proposed that finances be sought to erect a medical office building with the Society's quarters on the upper floors.

Another question which has arisen is whether the present buildings will in the long run serve the Society's needs adequately. Upon investigation the Committee has determined that the office space available at 1710 M Street is adequate to meet the Society's needs for the next decade or two. It is evident, however, that the building at 1718 M Street, especially the auditorium, requires some modernization.

Another matter which was explored was the possibility that the American Medical Association, which is reported to be seeking to purchase property for its Washington office, might be interested in the purchase of the property at the corner of 17th and M Streets with the view of the Society becoming a lessee. However, it was learned that the Association is not interested in the location.

These and many other aspects of the situation were discussed at some length. The conclusion reached by the Committee was that it should recommend to the Executive Board that the purchase of the property at the corner of 17th and M Streets be not considered at this time; that the Society had nothing to lose and much to gain by retaining its present property; and that its buildings are unusually well planned and adequate for the Society's needs for several years to come. Its recommendations were presented to the Board, which concurred.

The Committee wishes the membership to know that it did not reach its conclusions without thoughtful deliberation. There may be unforeseen changes in the economic situation which may adversely affect property values. This does not seem probable. Obviously, the Committee can only use the best judgment of which it is capable.

The Society's property is free of encumbrance and is therefore not a burden financially except where upkeep is concerned. The older of the two buildings is at 1710 M Street, and the upkeep of this building will naturally be more costly than that of the one at 1718 M Street. All in all, the Society can be justly proud of its home, which has so favorably impressed visitors from all parts of the country.

* * *

Air Mystery Solved

Sensational air crashes in the past year have given Federal investigating agencies little respite. Their efforts to determine the cause, whether it be due to mechanical or human failure, have been widely publicized. Not so well known to the public has been the role of medical investigators. The fact of the matter is they have on several occasions provided vital information. A dramatic example of this is the following report appearing in the November 4, 1960 issue of the *Medical World News.*

On January 6 last year Flight 2511 crashed near Bolivia, North Carolina at 2:38 a.m., killing all 34 aboard. A few hours after the tragedy the Civil Aeronautics Board was notified. It immediately informed the Armed Forces Institute of Pathology, which assists in the investigation of civil air accidents. Dr. F. Warren Lovell was at the time the "pilot-pathologist-surgeon" for AFIP. He immediately flew to the crash scene, carrying his autopsy field kit.

Dr. Lovell made an external examination of the bodies the day following the crash. Given permission by the local coroner he later performed autopsies on the 32 bodies recovered. There were two missing, the 32 being found within a few hundred feet of the main wreckage. As might be expected, injuries included fractures of extremities, ribs, and skulls; multiple lacerations; and "a number of nearly identical tears of the perineum." However, there were no amputations, nor major body parts missing. Autopsies of the pilot, co-pilot and engineer disclosed nothing unusual.

As this was going on, CAB investigators traced bits of wreckage to Kure Beach some 16 miles from the crash, and got under way with the reconstruction of the plane to the extent possible.

Three days following the crash "an air-borne fish spotter," flying along the beach, sighted one of the two missing bodies. Upon examination, it was found to be that of a Julian A. Frank, a Connecticut lawyer.

> "Upon learning that Frank's body was found. . . ," Dr. Lovell stated, "my immediate reaction was to associate the news with the British Comet I accidents in the Mediterranean in 1954. You will remember that passengers were blown out of the Comets by an explosive decompression of the cabin. It also crossed my mind that medical investigators were able to determine the likely cause of the Comet disasters prior to the time the engineers reconstructed the aircraft.
>
> "An exceedingly complete examination of Frank's body, including X-rays and photographs, was made immediately. The body showed extreme mutilation and partial amputation of the lower extremities. The left forearm was attached to the arm by skin and soft tissue, the muscles were torn and shredded, the interosseous membrane torn, the ulna obliquely fractured near the mid-portion. The left wrist was severely damaged, with partial avulsion of the soft tissues, particularly on the palmar surface of the right thumb, index and middle fingers, and multiple fractures of the phalanges.
>
> "X-rays showed numerous radiopaque objects in the right wrist and thigh. A small piece of brass, about $\frac{1}{32}''$ thick and $\frac{1}{8}''$ long and wide, was imbedded in the muscle mass below the left elbow.
>
> "The lower part of the left leg was missing entirely."

In looking over the photographs and other findings, Colonel Robert H. Holmes, then Chief of the AFIP Forensic Pathology Division, was certain that the injuries were identical to those caused by land mines. Another reason for arriving at this conclusion was that Frank's injuries were unlike those of the others on the plane. This prompted Colonel Joseph Blumberg, Acting Director of AFIP, to order another examination of Frank's body. On the day this action was taken, it was learned that Frank had recently been insured for $1,000,000.

Frank's body was removed to New York City where authorization was obtained from the family to make a postmortem examination. Foreign material, including bits of steel wire, were found imbedded in the right wrist and 2 pieces of a woman's hat ornament in the muscle tissue of the left leg. It was observed, too, that skin lesions were blackened.

"Histological examination showed that a section of the hypothenar eminence of the left hand contained skeletal muscle in the skin at the margin of the wound; it looked as if it had been driven in by considerable force."

As a result pathologists were convinced that Frank had been a victim of a blast injury. However, nonmedical investigators and the FBI, still skeptical, did not accept the conclusiveness of these findings.

A mock-up of the plane disclosed nothing significant except a gaping, jagged hole on the right side of the cabin in the vicinity of seats No. 6 and 7 where Frank had sat.

Many other studies by pathologists and toxicologists are detailed in the *News* report which, for lack of space, cannot be included here. However, they all added up to the conclusion that a blast had been the cause of the plane's disintegration.

It was at this point that Dr. Lovell and Dr. S. J. Sluter, consultant to Douglas Aircraft, made a discovery. Rummaging through the wrecked plane Drs. Lovell and Sluter noticed a "strong offensive odor." Reaching into the overhead hat shelf, Dr. Sluter withdrew a bone $10\frac{1}{2}''$ long. It was identified as the left fibula, distal end, with the distal articulations intact. It was Frank's missing lower leg. "Attached to the one tissue were pieces of olive-drab cloth and a brass plate similar to that found on a small alarm clock."

On March 22, 1960, at the CAB hearings in Wilmington, North Carolina, Dr. Lovell reported the findings of the military and civilian pathologists. The report stated that the pattern of Frank's injuries indicated "an explosive force was in close proximity to and immediately behind the legs of this passenger."

Several weeks later the CAB concurred. Its report read, in part:

"It is the Board's conclusion that Flight 2511 proceeded in a normal manner without operational difficulty, mechanical failure or malfunction until shortly after passing the Carolina Beach 'H' facility, a short distance south of Wilmington, N. C.

"At approximately 0233 a dynamite charge was exploded, initiated by means of a dry cell battery within the passenger cabin and at a point beneath the extreme right seat of row No. 7.

"Mr. Julian A. Frank was in close proximity to the dynamite charge when the detonation occurred. . . .

"The Board determines that the probable cause of this accident was the detonation of dynamite within the passenger cabin."

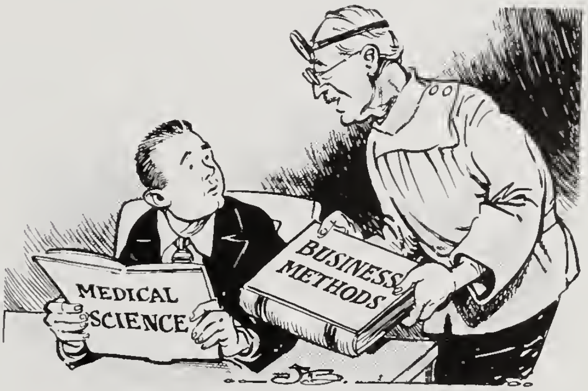
Although the cause of the tragedy was thus cleared up, the case is not closed. It still has not been determined how the dynamite which caused the blast was brought aboard Flight 2511, nor the identity of individuals responsible for its detonation. The FBI is continuing its investigation.

★

The Hard Way "Few physicians now in practice are familiar with proper procedures in their financial relationships with patients and others with whom they deal daily. What knowledge they have gained is usually of the kind which has been passed on from practitioner to practitioner. . . . It may be possible that friends in business whose guidance may or may not be dependable have come to their rescue. Some physicians, of course, have been beneficiaries of sound advice.

"Such groping for information on matters of vital importance to the welfare of doctors and their patients is haphazard, to say the least. It is strongly reminiscent of medicine of an earlier day when the neophyte gathered what knowledge he could by associating with an experienced practitioner. Surely this approach to efficiency in necessary business procedures should be promptly remedied."[1]

The above, which was written by your Observer in 1937, is as applicable today as it was then, for the situation has changed very little. Medical schools in various parts of the country have offered courses or a series of lectures on the nonprofessional aspects of a doctor's practice, i.e., office management, medical-legal problems, public and professional relations, group practice, etc. There are comparatively few, however, which have found it possible to include such subjects in an already overcrowded curriculum.



"Another textbook you'll need, son . . . ."

Early in the 1930's, at the request of the Dean of the Marquette University School of Medicine, your Observer delivered a series of lectures to juniors and seniors at that school. The topics covered were those referred to above and others which, in his opinion, would be helpful to the young doctor entering practice. The lectures were considered important enough to be given during the early afternoon hours when the students were not too fatigued to give close attention. How beneficial they were, your Observer can only surmise. At least he assumed from the comments made to him at the time by faculty members and students that they served their purpose fairly well.

When, in 1944, he was invited to give a series of talks on similar subjects to the seniors at the Georgetown University School of Medicine, conditions had changed materially. Medicine had made great strides, demanding more of the students' time and thought. Didactic lectures for seniors were on the way out. Lectures on nonscientific subjects had therefore to be given at odd hours. In these circumstances attendance and interest fluctuated from year to year.

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[1] WIPRUD, THEODORE: The Business Side of Medical Practice. Philadelphia: Saunders, first edition, 1937; second edition, 1949.

This development was understandable to your Observer, because a larger number of students than during his years at Marquette planned to take residencies, and problems involved in conducting a practice naturally seemed remote. In these circumstances he came to the conclusion that the time and effort devoted to the program were not justified.

In your Observer's opinion, the ideal time to discuss the practical problems which will face the young doctor endeavoring to establish a practice is during the last year of his residency. However, this presents difficulties because his hours on duty make it nearly impossible for him to set aside the time required. If it were possible to obtain his attendance at a central meeting place where experienced physicians and experts in various fields would deal with subjects on which they were well informed, that would be ideal, but in the present circumstances this appears impractical.

Modest attempts along this line in the District include a panel discussion known as "The Question Hour." It was presented for the benefit of residents and interns at D. C. General Hospital. The panel consisted of experts who answered questions put to them on a variety of matters of interest to neophytes in practice. Another project which has proved its worth has been luncheons for recently elected members. Several hundred physicians have attended these luncheons, which have been limited to 25 to 30 members each so that there is ample opportunity for those present to ask questions and to participate in the discussion. Subjects discussed have covered a wide range of topics relating to medical organizations and medical practice.

Sporadically the Society has offered programs for its members at which the various aspects of conducting an office have been discussed by physicians and others qualified to do so. For example, one program sponsored a few years ago was entitled "Look Again, Doctor!" The attendance was large, and the interest shown was highly gratifying.

Your Observer still believes that the ideal time to orient the young physician is just before he leaves his residency to enter practice. In his opinion, further attempts should again be made to develop a workable and effective program so that neophytes will not have to learn the facts of professional life the hard way.

★

Dr. John McCrae

Not a few physicians have distinguished themselves in the literary field. With very few exceptions they have been professionals devoting full time to writing. Seldom have amateur writers in the medical profession risen to fame. An exception was Dr. John McCrae. Who was he? He is readily identified by the following lines:

> "In Flanders fields the poppies blow
> Between the crosses row on row."

Dr. McCrae was a part-time writer of verse, according to Evan Charles of the North American Newspaper Alliance. He was born in Guelph, Canada, not far from Buffalo, N. Y. He received his medical degree from the University of Toronto in 1910, after serving with the British troops in the Boer War. Following the cessation of these hostilities he returned to the practice of medicine. However, this was of short duration, for he was soon to enter again the service with the Canadian artillery in Africa. He was there when World War I broke out and immediately volunteered for artillery duty.

Dr. McCrae left for France in 1914 and was in the thick of the battle of the Marne. It was here that the Germans were repulsed but held a defensive line on high ground east of Ypres. During the early winter the Germans made another attempt to break through the Allied defenses and reach the English Channel, but after bitter fighting failed.

In the spring of 1915 the Germans revived their attack in an attempt to cut France off from England, but this was checked by the Canadian forces. Dr. McCrae, Mr. Charles states, attended front-line services on Easter Sunday. Shortly thereafter he wrote, "If the dead rise not, we are of all men the most miserable."

It was at this time that he was transferred to the medical service, although he remained at the front with his artillery unit. Reportedly, he spent as much time on the firing line as he did at his medical station.

As the weather improved, fighting around Ypres intensified. "We have been in the most bitter of fights," wrote Dr. McCrae. "For 17 days and nights, none of us have had our clothes off. . . . In all that time, gunfire never ceased for 60 seconds. . . . The men are worthy of all praise that can be given."

By now Lieutenant Colonel, Dr. McCrae, distressed by the continuous stream of wounded, wrote, "My clothes were sadly bloody." It was at this time that he composed the immortal lines of "In Flanders Fields." The poem appeared in the British magazine *Punch* in the issue of December 8, 1915, but attracted little attention. Incidentally, *Punch* misspelled the author's name when listing him in its annual index.

Eventually, however, it was to become the most frequently quoted verse to emerge from World War I. It was subsequently published in a collection of Dr. McCrae's poems printed in 1919.

Unfortunately, Dr. McCrae did not live to see the end of the War and the publication of his collection of poems. Conditions in the military hospital where he was serving were very hard. "Everyone is suffering and the men cannot keep warm," he wrote. "For my own part, I do not think I have ever been more uncomfortable."

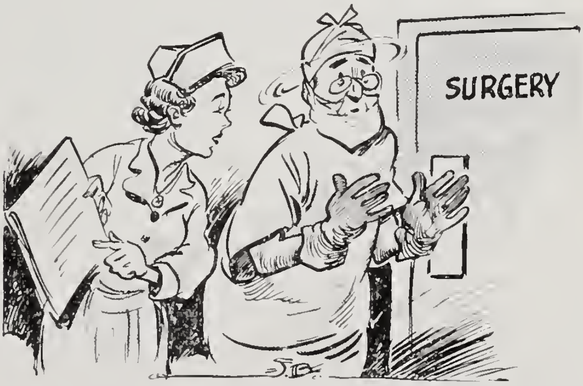
His strength ebbed and finally in January, 1918 he fell ill with pneumonia and died in two days. According to Mr. Charles, he was buried on a "sunny slope facing the sunset and the sea. . . ."

There must have been other part-time writers among physicians who have risen to fame, if not in the literary field, certainly in other branches of the arts. Your Observer solicits information about them for readers of this column.

★

Meetingitis It seems to many Washington physicians that aside from their practices their lives are monopolized by endless meetings. This has given rise to a chorus of complaints with the plea that something be done to curtail them.

Heading the list of meetings which the physician must attend are those of the hospital medical staffs of which he is a member. Other qualified "must" meetings include various medical societies to which he belongs. Aside from the District Medical Society, there are more than 30 special or small medical societies. It isn't unusual for the physician to belong to 2 or 3 of these, and if he is a conscientious member he feels that as a matter of loyalty he should support all of them by his presence. As some of these have a social side, he enjoys fraternizing with his fellow physicians. However, the demands upon his time frequently make this impossible.



"Cut this one short, Doctor. . . . You've a luncheon meeting in twelve minutes."

In addition to his professional associations, there are his church, civic organizations and service clubs to which he may belong. As if this were not enough, someone is always planning new organizations to which he may be invited to belong and which for one reason or another he does not feel he can turn down.

Small wonder then that he suffers from what is described in Kiplinger's *Changing Times* for November 1960 as "meetingitis."

> "Are you suffering from ragged nerves, loss of sleep and general discomfiture in the region of the base of the spine?" the *Times* asks its readers. "If so, you may be the victim of a virulent disease that plagues American cities and suburbs. Its nonscientific name is meetingitis, and it is most likely to strike down young to middle-aged adults of either sex who attend more than one meeting a week. The number of potential victims runs into the millions.
>
> "Meetingitis is not a new disease. The Frenchman Alexis de Tocqueville noted it in 1835 when he wrote, 'Americans of all ages, all conditions, and all dispositions constantly form associations.' The Scotch observer James Bryce reaffirmed the judgment 50 years later. And, more recently, the historians Charles and Mary Beard, describing the advent of the machine age, said, 'It was a rare American who was not a member of four or five societies. . . . Any citizen who refused to affiliate with one or more associations became an object of curiosity, if not suspicion.' "

The *Times* ascribes the frequently debilitating meeting phobia as a craving for "belongingness." But, why 3 or more meetings a week? "What's needed," the *Times* insists, "is a law requiring that all meetings be held on Tuesday. Anybody caught at a meeting on Monday, Wednesday, Thursday, Friday, Saturday or Sunday is subject to a $1,000 fine, one year in jail, or both."

Among other observations are the following:

> "Try to ascertain the real *raison d'être* for every organization you belong to. The truth is, most of them are started so members can hear a few good speakers. But once the group gets going, the purpose quickly changes to trying to find a few good speakers to address the group. Once a speaker is obtained, however, the objective quickly changes again to trying to get enough members to attend the meeting so the speaker will have someone to speak to. Does this rat race make sense?
>
> "One good antidote for meetingitis is the one-man committee. A one-man committee can meet in old clothes by his own fireplace with his feet up and refreshments at hand. And he can always adjourn on time. Furthermore, a committee of one can make better decisions than a committee of several.
>
> " 'Funnel several good men, each possessed of a good share of sound judgment, into a committee room and what do you have?' asks a management expert. 'Even more sound judgment? Not usually. In most cases, each one tends to rely on the opinions of the others. As a result, a group of competent executives may make mistakes that none would commit alone.' "

Summing up, the *Times* recommends: "One-man committees, no new organizations unless the perpetrators can prove their need, and the Tuesday meeting law."

Seriously, there seems to be only one solution where doctors in the District of Columbia are concerned and that is to consolidate and coördinate medical meetings. That is the goal to which the Medical Society is dedicated (see In and Out of Focus, "Time for Another Step," MEDICAL ANNALS, November 1960). Prospects for attaining this objective in the immediate future are not too bright. However, common sense where meetings are concerned will surely prevail eventually.

T. W.

REPORT ON MEETING OF AMA HOUSE OF DELEGATES*

The Clinical Meeting recently held in our city was a successful one. The total registration of 8,170 included 3,940 physicians, all of whom seemed well pleased with the substance of the meetings as well as with the arrangements.

The House of Delegates met at the Sheraton-Park Hotel for the study of material which had to do with the policies of the association. As you know, your delegates introduced a resolution having to do with the extension of voluntary health insurance programs. Two somewhat similar resolutions were introduced by other delegations and all were considered together with a report of the Board of Trustees. The resulting substitute resolutions are, in the opinion of your delegates, a proper step toward the establishment of a voluntary health insurance program on a Nation-wide basis. The resolutions are as follows:

"*Resolved*, That the House of Delegates direct the Board of Trustees and the Council on Medical Service to assume immediately the leadership in consolidating the efforts of the American Medical Association with those of the National Association of Blue Shield Plans, the American Hospital Association and the Blue Cross Association into maximum development of the voluntary, nonprofit prepayment concept to provide health care for the American people; and be it further

"*Resolved*, That similar leadership be undertaken to coördinate the efforts of private insurance carriers through conferences with their national organizations; and be it further

"*Resolved*, That, where feasible, efforts be made to coöperate with representatives of other types of medical care plans, other professional groups, and representatives of industry, labor and the public at large."

The House of Delegates approved a scholarship and loan program proposed by the Special Study Committee of the Council on Medical Education and Hospitals, and also urged that there shall be local participation in the program at the state and county level. In commenting on the 2-part program, the House approved the following statement by the reference committee:

"This proposed program will provide concrete evidence of the American Medical Association's sincere desire to attract increasing numbers of well qualified young people to enlarge the ranks of our profession. Your reference committee recognizes that the program is wisely designed to allow for its enlargement through the support of individual physicians and other groups. Your reference committee was impressed with the enthusiastic support of this proposal indicated during the course of the discussion. There was indicated a desire that in the final formulation of the administrative details of this program provision be made for widespread participation by individual physicians as well as county and state medical societies. The program will clearly assist in securing highly talented individuals whose ability and leadership in all areas of medicine will be fostered and at the same time will bring needed financial assistance on a broad basis to medical students under a system in keeping with this Association's belief in individual responsibility."

The problem of foreign medical graduates was considered and the House of Delegates adopted a report which included the following statement:

"In order that those foreign physicians who have not yet been certified by the Educational Council for Foreign Medical Graduates might be given further oppotunity to enhance their medical education, hospitals would be encouraged to develop special educational programs. Such programs must be of educational worth to the foreign graduate and must divorce him from any responsibility for patient care. Foreign physicians may participate in these programs until June 30, 1961, with approval of the Department of State so that their exchange visa will not be withdrawn before that time. This will also allow the noncertified foreign physician the opportunity to take the April, 1961 Educational Council for Foreign Medical Graduates examination."

The American Medical Association is a big business. Its present budget is over $16,000,000 and only about 25 per cent of this comes from the dues of members. Because of the growing demands on its resources the Board of Trustees announced that an increase in dues would be recommended at the annual meeting in June 1961. The House approved the report, which indicated that an increase of $10 to $25, to become effective January 1, 1962, would be suggested, but asked the Board to consider an increase in the annual dues of $20.00, to be implemented over a period of 2 years: $10.00 on January 1, 1962 and $10.00 additional on January 1, 1963.

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* This report is a summary of actions of the House of Delegates which met during the 1960 Clinical Meeting of the American Medical Association in Washington, D. C., November 28–December 1, 1960.

The House suggested that these funds be used to inaugurate or expand a number of programs, including:

1. Financial assistance to medical students
2. Continuing education for practicing physicians
3. Health advice to the lay public
4. Medical research
5. The expansion by the Communications Division of its program of faithfully portraying the image of the American Medical Association.

It is important, the House emphasized, that the Board of Trustees' report recommending a dues increase be transmitted in essence to the grass roots level.

HEALTH CARE FOR THE AGED

The House reaffirmed the Association's support of the Kerr-Mills Bill, which was passed last summer, and its opposition to any legislation involving the use of the OASDI mechanism for medical aid to the aged. The delegates also urged all state and local medical societies to coöperate with the appropriate state officials and provide leadership in implementing the provisions of the Kerr-Mills Bill.

In connection with health care for the aged, the House suggested further experimentation in home care programs, homemaker services. and visiting nurse services. The delegates also recommended an increased emphasis at all levels of medical education on the new challenges being presented to physicians in the health care of older persons.

USE OF POLIO VACCINE

Regarding the use of polio vaccine, the House agreed with a Board of Trustees' report which read:

"In view of the fact that oral polio vaccine will not be generally available in sufficient quantity in 1961 for any large scale immunizing effort, the Board of Trustees of the AMA strongly recommends that the medical profession encourage the widest possible use of the Salk vaccine for the prevention of poliomyelitis. The Salk vaccine has been proven to be effective, and since there are still many segments of the population not immunized against poliomyelitis every effort should be made to encourage the general public to take advantage of the Salk vaccine without delay."

The Board report was amended to suggest that a proper committee be established by the AMA to study the problems involved in administration of the new oral polio vaccine and to establish guides for physicians to follow when they are approached by various groups and asked for their support in administering oral polio vaccine.

In considering a wide variety of resolutions and annual and supplementary reports, the House also:

Approved continuing study and periodic reëvaluation of the trend toward locating physicians' offices in or adjacent to hospitals;

Directed the Committee on Medical Care for Industrial Workers to carry out its duties as previously instructed and to prepare guides for physician relationships with medical care plans in conformity with the clear policies already laid down by the House of Delegates;

Approved a set of guides relating to drug expenditures for welfare recipients;

Asked the Board of Trustees to study the question of blood replacement responsibility and also the matter of establishing health insurance fee schedules for surgical assistants;

Urged the Board to make every effort to reduce the number of physicians who are nondues-paying members and approved a 3-year study report on the relationships of physicians not in private practice to organized medicine;

Requested the Board to present a completed retirement and disability insurance program for AMA members at the June, 1961, meeting. This is in keeping with the statement of the Board made at the Miami meeting in which the insurance programs were to have been offered at this meeting. The delay was caused by the complexity of the problem and the desire of the Board to submit the best possible plans to meet the needs of all the membership.

Respectfully submitted,
RAYMOND T. HOLDEN, M.D., *Delegate*
RALPH M. CAULK, M.D., *Delegate*
THEODORE WIPRUD, *Secretary*

PATIENT REACTIONS AND PATIENT NEEDS IN ILLNESS*

THOMAS E. RARDIN, M.D.

Vice Chairman, Section on General Practice, American Medical Association

One day, five years ago, Dr. Robert Zollinger, Chief of Surgery at Ohio State, came into my room, handed me a notebook, and said, "Tom, I want you to start writing down your reactions and experiences as a patient; later on I want you to tell us about them, then publish a paper on 'What It's Like to Be a Patient.' "

Bob said this to me a few days after I had undergone a hemipelvectomy for chondrosarcoma of my right ilium. I am sure he wanted to keep my mind occupied, and for several weeks I did keep daily notes. In the interim I have given much thought to what it's like to be a patient. I have shared my experiences, thoughts, emotions and actions with many of my patients, also my colleagues; as a result, I have developed strong feelings and convictions about the patient-doctor relationship from the perspectives of both patient and doctor. Eighteen months ago I had my original experiences vividly reëmphasized when I underwent a bilateral thoracotomy with resection of multiple nonspecific granulomata in both lungs. You can imagine my feelings and reactions, as well as those of my physicians, prior to exploration. In view of my original lesion, several weeks elapsed before a definitive diagnosis was made and confirmed. By the time pathologic reports came in from other centers, you can appreciate my emotional state.

This morning I am going to discuss a few psychologic factors, in the doctor-patient relationship based upon my own experiences as well as those of many of my patients I have taken care of as a family doctor during the past 30 years.

What is it like to be a patient? What are some thoughts, feelings and attitudes of patients? How can we physicians meet the needs of ill people? How can we bring the fine, scientific knowledge of today to our patients in a "personal" rather than an "impersonal" manner? These are questions each of us should ask himself as we go about our work.

Regardless of whether a patient comes to our office, sees us in his home, or requires hospitalization for serious illness, here are some of his thoughts. I wonder what is wrong with me? Can it be cured? Can I get relief from whatever bothers me? Do I have cancer? Will my doctor tell me the truth? Will he really take an interest in me?

Such thoughts produce unpleasant feelings; as a result most patients we see are frightened, quite insecure, sensitive, doubtful, suspicious, anxious. While many patients try to appear calm and often joke about their illness, underneath each is deeply worried. At such periods a patient feels very lonely. He readily misinterprets many things.

Think for a moment about the reactions associated with such experiences as having an intern jab both arms and hands hunting veins for repeated venoclyses, going through the discomfort of a sigmoidoscopic examination, enduring the severe pain of a distended bladder needing catheterization only to have a resident say he will take care of you in another hour—to mention but a few of the common hospital experiences our patients have.

Consider also what happens when you try to analyze the significance of your disease, especially when your doctor says either too little or too much—you really tend to become confused, frightened, suspicious.

A hospital stay becomes quite an experience, a real eye-opener, especially when you, the doctor, becomes a patient. I am certain our patients would receive far more personal care, attention and concern if each of us could experience a serious and unpleasant medical, surgical or emotional illness. We become far more understanding doctors after such experiences. I do not recommend this; however, there is no teacher like experience!

Basic Emotional Needs

Now, what are some of the needs of patients and how can we doctors meet these needs?

With the insecure feelings I have just mentioned, I am sure every patient needs to identify strongly with kind, optimistic, understanding and supportive people. In other words, he needs to feel close to those about him. In the office this includes the receptionist, nurse and doctor; in the hospital it includes technicians, nurses, interns, residents, and all attending and consulting doctors. There is no more effective medicine than kindness! And the art of being kind, sensitive and understanding must not only be found in the personal, family doctor; it must be developed and used effectively by every one taking care of the sick. There is no substitute for kindness.

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* Presented at the Forum on General Problems in Medical Practice, sponsored by The Medical Council of the Washington Metropolitan Area at the Hotel Statler-Hilton, in Washington, D. C., October 29, 1960.

COMMUNICATION NEEDS

Every patient wants and needs to understand what is going on and why it is going on.

In the office, for example, we might be shocked if we knew how a patient misinterprets the significance of the simple procedures we employ in doing physical examinations and, particularly, any test or procedure not already familiar to the patient. After many years I now attempt to anticipate such misinterpretations and prevent needless worry and anxiety by making reassuring comments at every opportunity. I am sure most of us have learned how not to show anxiety and concern when we find disturbing symptoms or findings, knowing we must have conclusive proof prior to discussing such findings with the patient. Fear, concern and anxiety are most contagious and we doctors pass these along frequently. There is an acceptable way and a proper time in which to communicate unpleasant news to nearly every patient. Proper timing of bad news is essential from a psychologic standpoint.

In the hospital, each patient as well as his family, should be briefed on diagnostic procedures and their significance to relieve fear, minimize discomfort, and secure interest and coöperation by both patient and family.

Paying attention to what a patient says or complains of is important. One should check a patient's complaint whether in the office, home or hospital. Often he is a most intelligent observer and may be helping you very much. Discomforts due to bowel impactions, postnasal irritation from a stomach tube, the aching of an arm held on a splint for hours while blood or fluids slowly run in—these are but a few of the experiences that merit close attention on the part of all attending personnel. A few kind words of explanation, an effort to encourage and to try to give some comfort or relief may be worth everything to the patient. Most important is the attitude of those attending the patient. To be ignored or ridiculed adds only to one's discomfort, and this may interfere with recovery.

Of great importance to every patient, as well as his family, is some understanding of his progress in any illness. Each patient needs to know how he is doing. Here is where artistry in communication is essential. I cannot take time now to discuss this important facet in our patient-doctor relationship; no doubt our panel will go into this during the question-and-answer period.

Those of us who work with sick people must like people if we are to understand, accept, then meet their needs. We must develop as much interest in each person as in each disease or disorder. We need to know how to communicate information to people. Our very title "Doctor" literally means "Teacher" and a good teacher is one who "motivates" others rather than recites facts and figures. It is well to remember that in most medical settings, the patient becomes the forgotten man from a teaching standpoint; this is especially true in many University teaching centers, where everyone is teaching some one other than the patient. If the latter has no family or personal physician to keep him oriented, he often becomes confused, dissatisfied, and critical of his experience. It hardly needs to be emphasized that we should use language a patient can understand when we talk with him. Finally, it is well to remember that what we do not say is sometimes more damaging than what we do say.

PSYCHOLOGIC CONSIDERATIONS IN FAMILY DOCTOR-PATIENT RELATIONSHIP

Most people have a family doctor or a personal medical advisor. Usually he is a general physician or, occasionally, an internist. There are certain psychologic facets in this relationship peculiar to it when compared to the temporary relationship established between the patient and consulting specialists.

The family physician, having seen his patient as well as others in his family over a number of years through minor and serious illnesses, in a variety of situational settings, knows the "person" well and is well known by this particular "person." The word "person" indicates the unique rapport between patient and doctor and is the one characteristic typical of every good family doctor. It develops only after long acquaintance and cannot be upset easily.

As a result of this continuing doctor-patient relationship the personal physician acquires an abundance of information about his patient's physical, emotional, spiritual, intellectual, cultural, social and economic status. Regardless of whether the family doctor is the only attending doctor during a particular illness or a member of a team attending the patient in serious illness, he is a most important figure. There is no substitute for him and it is important for all consulting or related attending men brought into the picture to keep this in mind. Remember, too, patients pay much more attention to and trust and believe their family doctors than any other men relating themselves to the patient. No matter how great a reputation a surgeon or other consulting specialists may have, it is the family doctor on whom the patient relies for his final answers. For this reason family doctors and specialists must work together closely as a team when both are seeing any patient.

I want to conclude my remarks by commenting briefly on the relationship between the art of patient care and the science of patient care. In a recent medical meeting I was asked this question, "What is more important—the art of patient care or the science of patient care?" Here is my answer.

The science of patient care is the foundation of medical knowledge on which good medical care is made available today for any person; the art of patient care is the technic by which those of us engaged in medical science bring this scientific knowledge to untrained people so as to motivate and encourage them to take advantage of our science. One cannot work without the other, and I believe each is equally important to the other.

Recently, one of my patients was given a meticulous physical survey at a nationally known clinic where her husband was undergoing a periodic executive physical examination. The impersonal manner and atmosphere, often so characteristic of these highly specialized settings, was such an unpleasant experience for this patient that she has no appreciation of the great scientific skills brought into play in her case. What a shame it is to realize that some of our finest scientific knowledge and skill is being applied with so little artistry and meaning! I am sure each of you know of many such experiences.

No other person can substitute for the doctor in the eyes of the patient. Therefore, it is essential for us to accept and then carry out our responsibilities at all times in patient care. By showing wisdom, understanding, good judgment, and developing an ability to convince our patients we are genuinely interested in them as people with diseases rather than just diseases, we will have done much to create an atmosphere in which the art and science of patient care are integrated into a truly comprehensive medical approach to illness—the type of medical care we want everyone to have today.

1975 Guilford Road
Columbus 21, Ohio

Books Received

Acknowledgement is made of the following books which have recently been received. Selections will be made for more extensive reviews in the interest of our readers and as space permits. Physicians are urged to submit reviews of additional books which, in their opinion, merit comment.

The Gentle Legions. Richard Carter. Price, $4.50. Pp. 335. New York: Doubleday, 1961.

Respiration; Physiologic Principles and Their Clinical Applications by P. H. Rossier, A. A. Bühlmann and K. Wiesinger. Edited and translated from the German Edition by Peter C. Luchsinger, M.D., Chief of Pulmonary Physiology Research Laboratory, Mt. Alto Veterans Administration Hospital, Washington, D. C.; Assistant Professor of Medicine, Georgetown University School of Medicine, Washington, D. C., and Kenneth M. Moser, M.D., Head of Chest and Contagious Disease Branch, U. S. Naval Hospital, National Naval Medical Center, Bethesda, Md.; Instructor in Medicine, Georgetown University School of Medicine, Washington, D. C. Price, $15.75. Pp. 505, with 95 illustrations. St. Louis: Mosby, 1960.

Pathology; a Dynamic Introduction to Medicine and Surgery. Thomas Martin Peery, M.D., Professor of Pathology, and Frank Nelson Miller, Jr., M.D., Associate Professor of Pathology, George Washington University School of Medicine, Washington, D. C. Price (paper), $5.50. Pp. 626. Boston: Little, 1961.

(*Continued on page 118*)

DOCTOR
DO
YOU
KNOW
?

The Papanicolaou smear test should be made on all patients with a normal or abnormal-appearing cervix.

YOU CAN OBTAIN A FREE VAGINAL CYTOLOGY KIT
with the following supplies sufficient for making smears on two patients:
Slides, Cervical Spatulas, Slide Holders,
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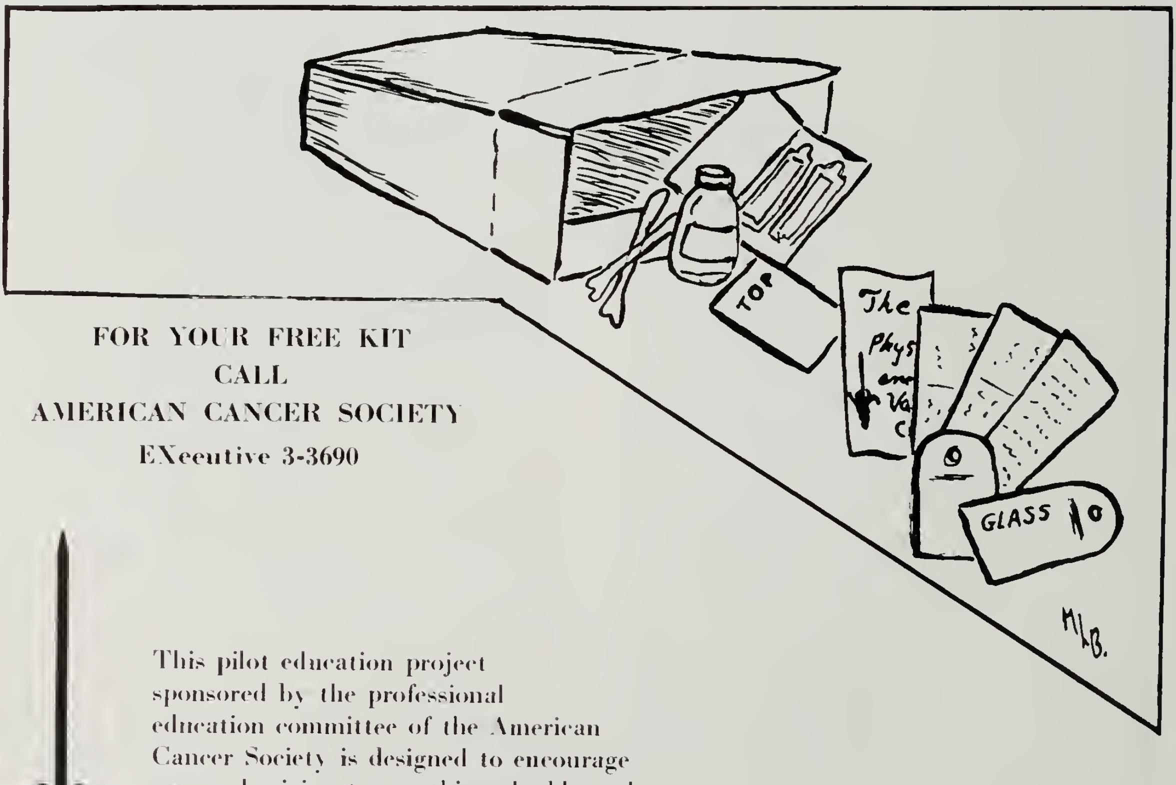

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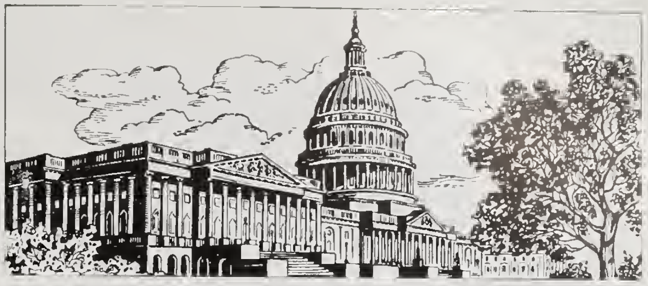
EXecutive 3-3690

This pilot education project sponsored by the professional education committee of the American Cancer Society is designed to encourage every physician to use this valuable and simple cancer detection test on all female patients at least once every year.



NEWS & PERSONALS

Meetings

On February 24 the **Washington Psychiatric Society and the Saint Elizabeths Hospital Medical Society** will sponsor a joint meeting in the D. C. Medical Society's building at 8:30 p.m. The speaker will be Dr. Henry P. Ward; his subject, "Psychiatry and Physiology; Mutual Expectations." Discussants will be Drs. Paul Chodoff and William S. Verplank.

On March 17 the Washington Psychiatric Society will hear an address by the President of the American Psychiatric Association, Dr. Robert Felix. There will also be election of officers.

A one-day **Symposium on Recent Advances in the Treatment of Diabetes Mellitus** is scheduled to be held in the Gorman Auditorium of Georgetown University Medical Center on Wednesday, March 8. Registration will open at 9:00 a.m. in the lobby of the Gorman Building; however, advance registration by mail is requested.

A number of out-of-town speakers will be present, including: Dr. James B. Field and Mr. Henry Keen, Investigators from the National Institutes of Health; Dr. Robert H. Williams, Professor of Medicine, University of Washington, Seattle; Dr. Edgar A. Haunz, Chairman, Department of Medicine, University of North Dakota; Dr. Edward L. Tarara, of the Mayo Clinic; and Dr. L. Harvey Hamff, Clinical Associate Professor of Medicine, Emory University.

Members of the Georgetown faculty who will appear on the program are Drs. Charles A. Hufnagel, Malcolm M. Martin, Sidney A. Tyroler, and DeWitt E. DeLawter.

There will be panel discussions following both the morning and afternoon sessions.

Chairman of the Symposium is Dr. James M. Moss, Clinical Professor of Medicine of Georgetown. The meeting is sponsored in part by a grant from Charles Pfizer and Company of Brooklyn, N. Y. All physicians are invited; there is no registration fee.

The St. George Society will hold its next meeting, March 7, in the auditorium of the D. C. Medical Society, beginning at 8:00 p.m. Dr. Roy Hertz, Chief of the Endocrinology Branch of the National Cancer Institute, will be the guest speaker. His subject will be "Chemotherapy of Choriocarcinoma and Related Trophoblastic Tumors."

A fellowship hour in the library will follow the meeting. All interested physicians, nurses, and other medical personnel are invited to attend.

The last meeting of the Society will be held on March 27, when there will be a panel discussion on "Cancer of the Female Reproductive System." Participants will be faculty members from the three medical schools.

General News

Dr. William Ross Morris, Chairman of the Executive Board of the Medical Society of D. C., entertained members of the Board at a dinner, December 20, which was followed by the regular business meeting.

Dr. Raymond T. Holden, senior delegate to the American Medical Association, read a report of the proceedings of the House of Delegates of the AMA, which met in Washington during the recent Clinical Meeting, November 28–December 1. The report is published in this issue of the MEDICAL ANNALS. It was accepted by the Board, and the delegates and those who assisted them were commended for their services.

The Board also voted to commend the members of the local Committee on Arrangements for the Clinical Meeting, of which Dr. Donald Stubbs was Chairman, for contributing to one of the most successful Clinical Meetings sponsored by the AMA.

President-elect Stubbs submitted a list of committee appointments for 1961, also published in this issue, which were confirmed tentatively by the Board subject to changes which might be made by the President-elect upon taking office January 1.

At the close of the meeting members of the Board presented the retiring Chairman, Dr. Morris, with a silver tray as a personal memento of their esteem for him. Dr. Morris, in accepting the gift from Dr. Victor R. Alfaro, President of the Society, stated that his service as officer of the Society and as a member of the Board had been a great pleasure.

Dr. Winfred Overholser, Superintendent of Saint Elizabeths Hospital, announces that it is now possible for physically and professionally qualified **psychiatrists to meet their military obligations** while assigned to the staff of Saint Elizabeths Hospital. For further information and application forms address Dr. Overholser at Saint Elizabeths Hospital, Washington 20, D. C.

At a meeting of the Board of Regents of the **American College of Chest Physicians** in Washington, D. C., November 28, 1960, a resolution was adopted to establish a **relief fund for the Cuban members of the College** who have been exiled temporarily from their country. The Board of Regents voted to contribute $5,000 to launch the fund, and contributions are being solicited from College members and others who are interested. Checks should be made payable to the Cuban Physicians Relief Fund, American College of Chest Physicians, and sent to the offices of the College at 112 East Chestnut Street, Chicago 11, Ill.

The Mead Dental Hospital at 1401 16th Street, N.W., has become a participating hospital of Group Hospitalization, Inc. According to Mr. F. P. Rawlings, Jr., President of GHI, it is the first dental hospital to qualify for participation. Its bed capacity at present is 15.

The Department of Health, Education and Welfare has awarded $162,060 to the **Georgetown Medical Center** for medical and dental research. Of this amount, Dr. Desmond S. O'Doherty, Associate Professor of Neurology, will use $52,029 as a neurology training grant. Dr. Cutting B. Favour, Professor of Preventive Medicine, will direct an infectious disease study under a grant of $28,256.

Dr. James H. Matthews has been appointed Chief of Clinical Research in Pulmonary Diseases for the **Veterans Administration.** He reported for his new duties at the VA Central Office in Washington on January 8. He succeeds Dr. James W. Raleigh, who left the VA to become Medical Director of the American Thoracic Society in New York City.

Dr. Matthews, who is a graduate of Vanderbilt University School of Medicine, comes to Washington from Oteen, N. C., where he was assistant Chief of Pulmonary Disease Service at the VA Hospital.

Suburban Hospital, in Bethesda, Maryland, formally dedicated its new 5-story wing on Sunday, January 8. This brings the Hospital's capacity to 300 beds or triple its bed capacity since it opened in 1943. The new wing is named for Mr. Carroll Morgan, President of the Hospital's Board for the past 6 years.

Dr. Austin Smith, President of the Pharmaceutical Manufacturers Association, announces the release of a **new publication,** *Medicine at Work.* "Medicine at Work" was presented as a section of *The Journal of the American Medical Association* from 1956 through 1959. It will no longer appear in the AMA *Journal.* Now to be published under the same title by the Pharmaceutical Manufacturers Association, *Medicine at Work* will be produced monthly by the staff editor who first developed that theme in 1956. The first issue is an 8-page periodical, printed in two colors on excellent paper.

Personals

Dr. William B. Walsh, President of the People-to-People Health Foundation and originator of Project HOPE, received the United States Information Agency's Distinguished Service Citation from Mr. George V. Allen, Director of the Agency, at a luncheon at the National Press Club, November 28. Dr. Walsh addressed the Club members on the subject, "The Challenges of Medical Diplomacy in the Newly Developed Countries."

The first team of medical volunteers is already serving in Indonesia, where the *S.S. Hope* is anchored in the harbor of Sourabaya. Dr. Walsh has plans for a Hope II for Africa and a Hope III for South America in another year, if public support permits.

DR. WILLIAM B. WALSH
Cited by U. S. Information Agency

Dr. Edgar W. Davis, Chief of Thoracic Surgery at the Washington Hospital Center, was elected President of the Center's Medical Staff at its meeting, January 2, succeeding Dr. J. Spencer Dryden. Dr. Davis was previously Vice President of the Staff.

Dr. Davis

Dr. Davis, a graduate of Emory University School of Medicine, is Clinical Professor of Thoracic Surgery at Georgetown University School of Medicine. He is Chief of Thoracic Surgery of the Georgetown Unit at the D. C. General Hospital and Chief of Thoracic and Cardiovascular Surgery at Children's Hospital. He is a diplomate of the American Board of Surgery and the American Board of Thoracic Surgery as well as immediate Past President of the Southern Thoracic Surgical Association. For a number of years he has been a member of the Board of Governors of the American College of Chest Physicians.

Other medical staff officers elected were: **Dr. Theodore J. Abernethy,** First Vice President; **Dr. Thomas W. Mattingly,** Second Vice President; **Dr. Francis L. Wenger,** Secretary; **Dr. Paul R. Wilner,** Assistant Secretary; and **Dr. Garnet W. Ault,** Treasurer.

Dr. Charles A. Hufnagel, Professor of Surgical Research and Director of the Experimental Laboratory at Georgetown University School of Medicine, was one of 10 leaders of American medicine who were honored, January 9, by the journal *Modern Medicine* for their contributions which have directly influenced medical progress in the United States.

Recipients of the Distinguished Achievement Awards were selected by the Editorial Board of *Modern Medicine* from nominations by deans of medical schools, leaders of professional medical organizations, and readers of the journal.

Dr. Hufnagel was specifically cited for his development of surgical technics for treating heart and great vessel disorders. He created plastic substitutes for heart valves and blood vessels and has made other pioneering contributions to cardiovascular surgery. He has been affiliated with the Georgetown Medical Center since 1950.

Dr. Edith Weigert, an Associate member of the D. C. Medical Society, will present the Ninth Annual Karen Horney Lecture in Hosack Hall, New York Academy of Medicine, New York City, on March 22. The title of her presentation is "The Function of Sympathy in the Psychotherapeutic Process."

The Karen Horney Lecture Memorializes the founder of the American Institute for Psychoanalysis. Dr. Weigert is a Fellow and a member of the Executive Council of the Washington School of Psychiatry, a Fellow of the American Psychiatric Association, and a member of the American Psychoanalytic Association. She is a charter member of the Academy of Psychoanalysis.

Dr. Herbert P. Ramsey, Chairman of the Hospital Advisory Council to the District of Columbia, has been named Chairman of the Physicians' Advisory Committee to the Greater Southeast Community Hospital. Present plans call for the construction this fall of a 300-bed hospital at 13th Street and Southern Avenue, S.E.

Obituaries

WILLIAM CABELL MOORE, M.D.

(1879–1960)

Dr. William Cabell Moore, Life member of the Society, a pioneer in industrial medicine, and one of Washington's leading internists for many years, died of a heart attack on December 18, 1960 at his home, 2011 R Street, N.W., Washington, D. C. He was 81 years old.

Dr. Moore was born in Washington, D. C., on April 28, 1879. He attended private schools in Virginia, obtaining his Bachelor of Arts degree at the University of Virginia in 1900. He graduated from the University of Virginia Medical School in 1902. An internship followed at the Norfolk Protestant Hospital (1902–3). He was licensed to practice in the District of Columbia in 1907 and remained in private practice until 1921, when he was made Medical Director of the Chesapeake and Potomac Telephone Company. He continued in this capacity until 1944, when he retired. During his service with the company he initiated many procedures employed in industrial medicine today. Upon his retirement he returned to private practice, in which he was engaged until his death.

Dr. Moore served as a Lt. Colonel in the Medical Corps of the United States Army during World War I. He was in charge of an Evacuation Hospital in France and was senior consultant in medicine to the Third Army in Germany, and returned to this country in 1919. During World War II he was a member of the Draft Appeals Board of Selective Service.

Dr. Moore was honored by the Medical Society of the District of Columbia in 1952 when he was presented with the Certificate for Meritorious Service for his outstanding contribution as chairman of the Society's Committee on Industrial Medicine. The certificate stated that Dr. Moore "considered no sacrifice of time and effort too great to further amicable relations between industry and medicine." In the summer of 1958 he was a recipient of the Gold-headed Cane at the First Annual Dinner of the Washington Hospital Center in recognition of his long and distinguished service to his profession.

The qualities which distinguished Dr. Moore were unwavering integrity and high ideals. These he would not compromise under any circumstances. Another characteristic which endeared him to patients was compassion and genuine interest in their welfare. He was also a true and loyal friend. Those who had the privilege of knowing Dr. Moore will therefore never forget this fine and devoted physician.

At times he was much troubled by the materialism which he felt had infected not only society generally but some members of his profession. He looked upon medicine as not just a vocation but a high calling, and often spoke of it feelingly.

He was an authority on Virginia history and had a deep affection for its people. He never completely reconciled himself to the humiliation heaped upon its people after the War Between the States.

Surviving Dr. Moore are his wife, Elizabeth F.; three brothers, Charles, of Richmond, Joseph F., of Charlottesville, and John H., of Cleveland; and four sisters, Mrs. Mary M. Miller, of Washington, and Mrs. Margaret M. Stalnaker, Mrs. S. C. Williams, Jr. and Mrs. Charles F. McIntosh, all of Berryville, Virginia.

THEODORE WIPRUD

EDWARD EMERY MORSE, M.D.

(1867–1960)

Dr. Edward E. Morse, a Life member of the Medical Society of the District of Columbia and one of its oldest members, died at the Washington Hospital Center, December 30, 1960. He had made his home at the Cosmos Club since 1958.

Dr. Morse was born in Bangor, Maine, January 7, 1867. He came to Washington in 1889 to attend Columbian Medical College, now a part of George Washington University, and received his degree in medicine in 1892. After interning at Garfield Memorial Hospital he went abroad to study obstetrics at the Rotunda Lying-in Hospital in Dublin, Ireland. Upon his return he taught at Columbian College as Assistant Professor of Obstetrics.

His offices and home during most of his long practice were at 1814 Jefferson Place, N.W.

In 1894 he was elected to membership in the Medical Association of D. C., which later merged with the Medical Society, and became a Life member of the Society in 1935. He was a member of the St. John's Church on Lafayette Square for 71 years. In addition to the Cosmos Club, he was a member of the American Medical Association, the Clinico-Pathological Society of D. C., and the Society of Colonial Wars.

Dr. Morse never married. He leaves a sister, Mrs. J. W. McClure, of Bangor, Maine.

URBAN JAMES DOWLING, B.S., M.D.

(1912–1960)

Dr. Urban J. Dowling, industrial surgeon in Northeast Washington, died suddenly, November 26, 1960. He was an Active member of the D. C. Medical Society.

Dr. Dowling was born, July 12, 1912, in Burlington, Iowa, to the late James J. and Mary M. Dowling. He attended high school in Kansas City, Missouri, and Rockhurst College in the same city for 2 years. He obtained the degree of Bachelor of Science from the University of Nebraska at Lincoln, and his doctorate in medicine in 1936 from the University of Nebraska College of Medicine at Omaha.

Dr. Dowling interned at Jefferson Davis Hospital in Houston, Texas, for 2 years and served a year's residency in surgery at the same hospital. He also took postgraduate study in gynecology at the Cook County Graduate School of Medicine in Chicago, and later an advanced course in orthopedic surgery, conducted by the U. S. Army in Paris, France, at the close of World War II. He served as orthopedic surgeon with the Army Medical Corps from May, 1944 to November, 1945, and was decorated for his services in the European-African-Middle Eastern Theater.

Prior to the War, Dr. Dowling practiced medicine in Sweetwater, Texas, from 1939 to 1944. After the War he returned to Texas and practiced in Amarillo for 3 years. He was licensed in the District of Columbia in 1950 and was associated with the Union Market Clinic at 416 Florida Avenue, N.E.

He was a member of the American Medical Association, and of the Texas State Medical Association until he moved to the District of Columbia. He became affiliated with the D. C. Medical Society early in 1951.

He is survived by his wife, Mrs. Leona Dowling, who resides at their home, 2812 Laurel Avenue, Cheverly, Md. He has one son, Dr. James Dowling, who is presently interning at the University of Oklahoma Hospital in Norman, Okla.

Lindau's Disease—Schechterman

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BOOK REVIEWS

Fundamentals of Chest Roentgenology. Benjamin Felson, M.D. Price, $10.00. Pp. 301, with 450 illustrations on 238 figures. Philadelphia: Saunders, 1960.

This is an excellent book for everyone interested in diseases of the chest. The author is a teacher with vast experience in medicine and in the interpretation of X-ray shadows. Much of the information presented is known to many senior physicians but nowhere else is this material imparted as well (except in Dr. Felson's original publications). He is especially lucid in explaining the important signs that enable the radiologist to find an abnormal shadow in the chest and exactly where it is located. This text is like a narrative a la Agatha Christie for it is as much an adventure to find an obscure shadow on a chest film as to identify the culprit producing it.

Gregory T. Henesy, M.D.

Obstetrics—From the Original Text of Joseph B. DeLee, M.D., 12th ed. J. P. Greenhill, M.D., F.A.C.S., F.I.C.S. (Hon.). Price, $17.00. Pp. 1098, with 1219 illustrations on 903 figures, 119 in color. Philadelphia: Saunders, 1960.

Much of the material relating to the physiology of obstetrics and to the normal aspects of pregnancy are presented in other books with little change. The section on obstetric pelvimetry is complete, but in summarizing the clinical applications of the various methods used, the author points out their inaccuracy. The chapters on the medical complications of pregnancy provide a complete and up-to-date reference source.

Operative obstetrics is unusually well presented and is of particular value because of its detail.

Medical moral problems are discussed by the late Dr. Herbert Schmitz and is an excellent addition and one not usually included in an obstetric text.

The book on the whole is distinguished by complete bibliographies after each chapter and by the incorporation of newer ideas developed since the printing of other standard texts.

Thomas M. Leonard, M.D.

The Triumph of Surgery. Jürgen Thorwald. Translated from German by Richard and Clara Winston. Price, $6.50. Pp. 454, illustrated. New York: Pantheon Books, 1959.

This narrative "eye-witness" history of surgery in the era after the advent of asepsis is both entertaining and informative. It is so well written and the episodes are so interesting that one need not have a medical background to enjoy it. The biographies will interest surgeons, but chiefly this is a good story, factually correct, reported in a modern "You Are There" motif.

A fictitious German physician-journalist gives a running report on his attendance at important medical meetings and clinics from 1881 to 1906. The narrator, Dr. Henry Steven Hartmann, travels widely, is welcomed into the homes of renowned surgeons, and has the good fortune to be present at scientific meetings, large and small, when significant advances are about to be revealed. The reader sympathetically participates in these triumphs of surgery and gains an insight into the social and personality problems which humanize the acceptance of such innovations.

Although the reader is never deceived by the opportune presence of the ubiquitous Dr. Hartmann, he accepts the historical occurrences because of an obviously well researched and soundly documented background (508 references and an index). The events are clearly and probably accurately described, and one is glad that the first person device has been used to make the technical facts more exciting.

In this book the reader visits the operating rooms of the surgical greats, sees the development of local anesthesia open up an entire frontier, and lives with European and American surgeons, some of whom were known by this present generation of surgeons.

Roy Klepser, M.D.

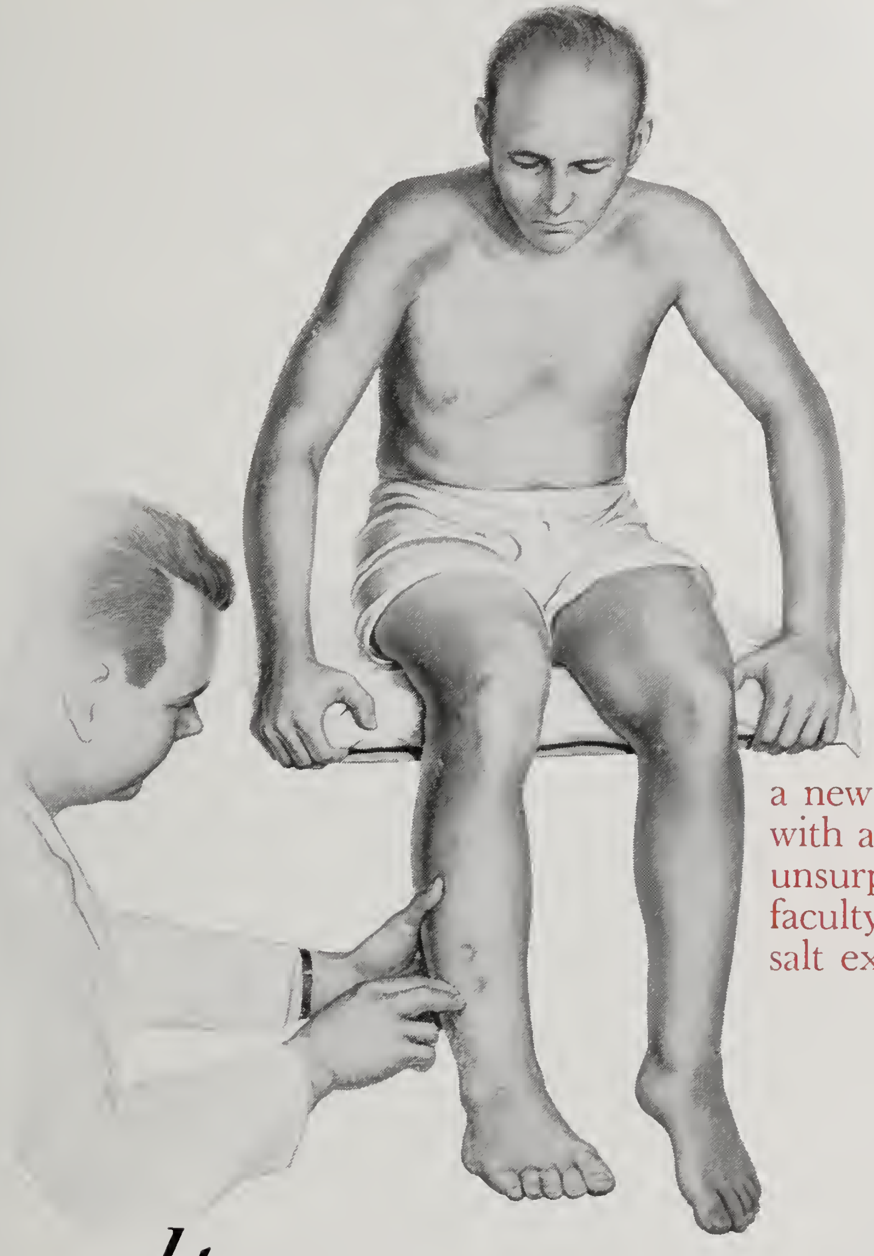
Ciba Foundation Colloquia on Endocrinology, Volume 13. Human Pituitary Hormones. In honor of Professor B. A. Houssay. G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P., and Cecilia M. O'Connor, B.Sc., Editors for the Ciba Foundation. Price, $9.50. Pp. 336, with 86 illustrations. Boston: Little, 1960.

This latest in the Ciba Colloquia on Endocrinology is a most interesting volume from many points of view. The Foundation has a reputation for its establishment of small conferences which take place in its home offices in Portland Place, London, England. This, to the best of my knowledge, is the first International Ciba Foundation Colloquium held outside the territory of England. It was organized and held in Buenos Aires just before the 21st International Congress of Physiological Sciences.

Contributors to the conference were many well-known investigators of international repute, led by Dr. F. G. Young, Department of Biochemistry, University of Cambridge, Dr. Russel Fraser and co-workers from England, Dr. Wilhelmi, Dr. Li, Dr. Raben, Professor B. A. Houssay, Dr. Venning, Dr. O. Pearson, and many others actively working in the realm of the pituitary gland.

The first part of the volume is devoted entirely to a review of current knowledge regarding pituitary growth

(*Continued on page 36*)



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PHARMACEUTICALS RESEARCH 18 78

Book Reviews

(*Continued from page 34*)

hormone. Particularly important contributions are a discussion of the newest method for assay of growth hormone by Dr. C. H. Read and Dr. G. T. Bryan; the studies of some of the intermediary metabolic effects of growth hormone, particularly on its mobilization components of fatty acids metabolism, by Drs. Raben and Hollenberg; effects of growth hormone on phosphorus and calcium metabolism, nitrogen metabolism, and its diabetogenic activities by Drs. Ikkos and Luft, Fraser and Harrison; studies on the variability and physiological responses to growth hormone by Dr. J. C. Beck, Dr. McGarry, Dr. Benning and others from Canada.

The second portion of the volume details studies of isolated human pituitary follicle-stimulating hormone and pituitary interstitial cell-stimulating hormones, effects of their administration in animals and patients. Further characterization of relationships between melanocyte-stimulating hormone and the adrenocorticotrophic hormones and the interesting correlative report of the current status of the assay of thyrotropic material in normal and hyperthyroid individuals.

In my opinion, this is an excellent Ciba volume both from the topics covered and the discussions which follow each. Perhaps the change in the conference location from its normal situation in London to Buenos Aires, prior to the meeting of the International Physiological Society, had much to do with this because a much broader general group of participants was possible. This is certainly a book which should be read and become part of the collection of anyone interested in investigations relating to the pituitary gland and its function, and it should be seen and read by anyone engaged in practice or investigation in the area of gynecology.

John J. Canary, M.D.

Ciba Foundation Symposium on Congenital Malformations. G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P., and Cecilia M. O'Connor, B.Sc., Editors for the Ciba Foundation. Price, $9.00. Pp. 308, with 91 illustrations. Boston: Little, 1960.

The relative number of deaths in infancy and childhood due to congenital malformations has increased with the advent of programs of preventive medicine, and with the successful treatment of infections with antibiotics. This development has focused clinical and research interest on teratogenesis with corresponding rapidly increasing accumulation of data, contributed from diverse fields, on the multitudinous causes of congenital malformations. Some of these causes reflect environmental, other genetic factors, but, as Penrose emphasizes, it is becoming increasingly difficult to distinguish clearly between environmental and genetic causes in the light of the newer knowledge gained from animal research. Teratogenic agents of great variety are now used experimentally, including known mutagenic influences like X-ray and special chromosomal poisons. Also, drugs and chemicals have been studied in connection with their ability to increase or decrease the teratogenic activity of the above agents. For example, it has been found that the activity of hypervitaminosis A is accentuated by cortisone and methylthiouracil and reduced by insulin, members of the B group of vitamins, and, most markedly, by thyroxine. These findings lend support to the view that hypervitaminosis A produces its effects by interference with the carbohydrate metabolism of the developing embryo. These experimental agents affect the change in the environment but also affect cell metabolism directly.

Newer technics have established unequivocally that the diploid chromosome number of man is 46. Also, in the last few years, 5 different conditions have been shown to be associated with abnormality of chromosomes, including Turner's syndrome, Klinefelter's syndrome and mongolism.

The influence of several environmental factors in inducing malformations are reported in experimental and clinical settings. For example, Nelson reported the teratogenic effects of pteroylglutamic acid deficiency in the rat. Hoel and others studied the role of pre-diabetes and hypothyroidism in the human. VanBeek found that in those mothers with pregnancy wastage, the glucose tolerance was mildly impaired during pregnancy, and, after following up cases for 10 years, that those women became overt diabetics. About 25 per cent of pregnancies associated with maternal diabetes result in hydramnios. However, gross hydramnios even with relatively early onset can be associated with perfectly normal children.

Many other practical and theoretical aspects of congenital malformations are presented. The record of the panelists' discussion follows each chapter in the conventional manner of reporting these Ciba Foundation Symposia. This brief authoritative book offers the reader a unique opportunity to become conversant with the very latest developments in the genetics of congenital malformations.

Harold Stevens, M.D.

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March 1961 VOLUME XXX • NUMBER 3

The Use and Abuse of Endotracheal Anesthesia*

SINISA SLEPCHEVICH, M.D.
Zagreb, Yugoslavia

EIGHTY YEARS have passed since the first abortive attempts at endotracheal intubation by W. Macewen[1] in 1880. During that time this method has been both condemned and praised by different authors. However, it has gained definite recognition and an important place in medicine, especially within the last 15 years. Its main advantages of securing a free airway, control over intrapulmonary pressure, and easy and efficient artificial ventilation have always been recognized. On the other hand, the technical problems in obtaining a smooth intubation without trauma to the patient have often been annoying and discouraging, especially to a neophyte. Two World Wars have contributed a lot to the development of the method, while the beginning clinical use of curare and short-acting muscle relaxants later on have brought the greatest contribution to the present-day utilization of endotracheal anesthesia.

In recent years the number of endotracheal intubations has been growing rapidly. Thus, Beecher's large series[2] shows that that number doubled between 1948 and 1952, seemingly as the result of new demands exerted by developments of modern surgery as well as new drugs introduced into anesthesia. This also has increased the total number of resulting ill effects, and it must be apparent that many of these intubations were not strictly necessary. It therefore seems important to show that safe anesthesia may be administered in many borderline cases without endotracheal intubation. It is a goal of every single anesthesia administered to disturb vital physiologic functions of the body as little as possible. The main vital functions that anesthesia interferes with are respiration and circulation. However, through them anesthesia influences the function of other vital organs (such as the brain and kidneys), and it is to bring the state of the anesthetized individual to one of physiologic sleep that is the aim of efforts made in improving anesthesia today.

It has been recognized from the early days[3] until now[4] that an easy intubation requires a level of anesthesia deep enough to abolish protective pharyngeal and laryngeal reflexes and to obtain adequate muscular relaxation. The enormous number of endotracheal intubations that are being performed nowadays in every surgical department suggests that these requirements have been attained. However, this makes it all the more important to assess indications critically and, especially in borderline cases, to balance disadvantages against relative need for endotracheal anesthesia. The near-universal popularity and use both of short-acting barbiturates and muscle relaxants for intravenous use make the need for reassessment more acute. A technic which in only a few seconds can provide a patient with abolished reflexes, good relaxation, and wide open cords makes intubation technically so easy to perform that the situation is almost too hard to resist.

---

* From the Department of Anesthesiology, Doctors Hospital, Washington, D. C.

Of course the main advantage of the endotracheal tube in place is freedom of the airway. The reason why absolute freedom of airway is of vital importance in anesthesia is that even small impairment with it brings about hypoxia and anoxia of tissues which so quickly can produce irreversible damage. Accompanying accumulation of CO_2, changes in pH of body fluids, and other pathophysiologic changes have so many times been observed that the importance of the free airway can never be overemphasized.

The very factors which have made intubation so easy today have also made it much easier to achieve an open airway without it. With a simple oropharyngeal airway the most frequently used instrument in anesthesia,[5] the obstruction of the pharynx can be relieved, while the fast-acting relaxants secure an open glottis. This gives not only a free airway but to a certain extent renders a good control over intrapulmonary pressure, and that means a possibility of easy artificial ventilation of the lungs. In this connection it is thoroughly logical and has been amply demonstrated that practically all patients in collapse can easily be ventilated by the simple use of a face mask and an oropharyngeal airway. Therefore, it is wrong to begin any resuscitation with time wasted during intubation, which is unnecessary. Instead, the initial ventilation with oxygen should always be with the simple airway.

In addition, the potential dangers of intubation itself are not negligible and are variable. They range from slight local inflammation and mechanical damage[6] to cardiac standstill.[7] The most common are local damages to nasal and pharyngeal mucosa, but these heal easily and with some care may be avoided. Damage to teeth is not infrequent and with a possibility of aspiration might be dangerous. Much worse is traumatizing of the vocal cords, which may be very unpleasant for both the patient and the anesthesiologist. Several important reflexes have their origin in that area and under certain conditions may be elicited with quite bad results. A relatively frequent respiratory complication caused by the irritation by the endotracheal tube is bronchospasm.[8]

One of the often mentioned complications is cardiac arrest.[7,9] It may originate through the afferent branches of the vagus in the larynx and the efferent vagus pathways directed to the heart, but this has not been definitely established, since some new studies suggest that circulatory responses to endotracheal intubation are caused by elicitation of sympathicoadrenal activity.[10, 11] Although this complication is rare, what happens more often is tachycardia, changes in blood pressure, arrhythmia, and extrasystoles. All this happens often because patients are not sufficiently oxygenated while the anesthesiologist is busy with placing the tube and does not have time or opportunity to engage in ventilation of the lungs. Anoxia, the most detrimental hazard of anesthesia, takes place.

Thus we have come to the situation where the uncritical use of new drugs with an old and good method has engendered an uncritical use of the latter. This review is intended to clarify the indications and results in our department.

Source of Material

A series of 883 unselected patients are presented who have undergone mostly elective surgery and give an average picture of operations performed in this department. This is a typical segment of the cases in this department and covered about 13 per cent of the total number of 6,600 operations under general anesthesia performed during a 10-month period.

The average, though not the invariable technic has been as follows: Induction of anesthesia is with intravenous thiopental. Gas-oxygen is given after that for a few minutes to obtain some additional anesthetic effect and to give a surplus of O_2. Then 60 to 100 mg. of succinylcholine is given intravenously for muscular relaxation, after which the patient is further oxygenated for 30 to 60 seconds while it becomes apparent that undesirable reflexes have been abolished so that laryngoscopy can be performed. When the glottis is exposed 10 per cent cocaine solution is applied gently locally to provide for easier tolerance of the tube during the induction and stabilizing phases of anesthesia. The tube is then placed into the trachea. If there is need for controlled respiration an inflated cuffed tube is commonly used. Maintenance is usually with the use of ethylene or nitrous oxide. Small increments of thiopental given intravenously or sometimes ether or cyclopropane and muscle relaxants are used as required by surgery.

Kinds of operations and percentage of intubations are presented in table 1. We can see that some operations require endotracheal intubation in every case. The need for control of intrapulmonary pressure, endotracheal and endobronchial suction, and some other obvious reasons make intubation in intrathoracic operations imperative. In craniotomies, in which there are also 100 per cent of intubations, the need for the anesthesiologist to be removed from the operating field, the frequent awkward position, and the generally easier and safer management of these patients with an assured airway make it necessary. In laminectomies the main reason for intubation is the prone position of the patient and the length of the procedure in such a position. In operations on the esophagus the anatomic characteristics of the operating field and its relation to the airway together with the reasons mentioned above for thoracotomy make the intubation of the trachea mandatory for safe anesthesia. Those were the only 4 operations in our department in which all of the patients have been intubated.

In tonsillectomies most of the patients that have been intubated were adults. If this operation is being done under general anesthesia in adults, it is much safer and easier to secure a free airway and prevent aspiration of blood if the tube is in the trachea. In children it can be done easily without a tube, and this course is generally preferred in our department.

TABLE 1

Operations and Percentages of Intubation

Operation	No. of Cases	No. of Intubations	Per cent of Intubations
Thoracotomy	58	58	100
Craniotomy	24	24	100
Laminectomy	69	69	100
Operations on the esophagus	15	15	100
Tonsillectomy	54	39	72
Gastrectomy	18	9	50
Thyroidectomy	39	9	23
Colon resection	27	6	22
Intestinal obstruction	15	3	20
Nephrectomy	15	3	20
Cholecystectomy	108	9	8
Appendectomy	90	0	0
Prostatectomy	15	0	0
Radical mastectomy	30	0	0
Hysterectomy	120	0	0
Cesarean section	33	0	0
Hernia repair	81	0	0
Hip-nailing	45	0	0
Totals	856	244	28

Gastrectomy is the only abdominal operation for which 50 per cent of the patients were intubated. It was done in the cases in which it seemed to be a safer method, in poor risk patients, or when a possibility of aspiration of foreign materials or a long operation was anticipated. In the other 50 per cent of patients that have not been intubated there was no trouble at all referable to the airway. Many authors have argued about the use of the endotracheal tube in thyroidectomy. Some have shown that complications are a little higher after its use.[12] Waters[13] has argued that it is easier for the anesthesiologist to tell whether the recurrent laryngeal nerve is being traumatized if the patient is not intubated. In my experience the intubation is necessary in big tumors that are possibly compressing the trachea, in extensive surgery in case of malignancy, or in some other rare patients whom it would be difficult to manage without a tube and in whom repiratory difficulties arise during induction. In other simple cases that constitute the majority of operative material, intubation was not performed and there were no complications.

In the next 3 groups of abdominal operations that have more than 20 per cent of intubations the reasons have been various. For example, in nephrectomies it is the position of the patient, whereas in intestinal obstruction the possibility of vomiting and other clinical indications may lead to intubation. In most cases of intestinal obstruction that have not been intubated the patients were in shock, and because of adequate Wangensteen drainage it was believed that there would be no vomiting. These patients were kept under light anesthesia, and there were no accidents. In a few cholecystectomies in which the patients were intubated a probable airway problem seemed to indicate it, but it is possible that these patients might have been well managed without a tube.

In the large group of most commonly performed operations that make up a majority of the cases in many general surgical departments we did not resort to endotracheal intubation at all. In appendectomies, hysterectomies, herniorrhaphies, and many other operations in elective surgery intubation of the trachea is absolutely unnecessary and if done is a nefarious practice.

Table 2 presents a group of patients for head and neck surgery. In these operations almost all patients, except those with surgery of the lips, were intubated in order to maintain a free airway, prevent aspiration of blood, or give the surgeon a free field of work. In both groups together (883 operations) there were 268 intubations, or about 30 per cent of the patients intubated, a number so big only because of the many thoracotomies and laminectomies performed in this department, but if we analyze separately different operations that are being most frequently done in most operating rooms we have a different and didactic picture (table 1).

TABLE 2

Percentages of Intubation for Head and Neck Surgery

Operation	No. of Cases	No. of Intubations	Per cent of Intubations
Operation on maxilla	3	3	100
Operation on submaxillary gland	6	6	100
Operation on tongue	3	3	100
Operation on nose	2	2	100
Laryngectomy	4	4	100
Operation on parotid gland	3	3	100
Operation on lips	6	3	50
Totals	27	24	90

In this series of cases it is demonstrated that operations in which endotracheal intubation is indicated may be divided into 4 groups as follows:

1. Open thorax surgery
2. Operations on the head and neck interfering with a free airway
3. Operations in the prone position
4. Operations in which a possibility of aspiration of foreign materials is anticipated.

Discussion

Published reports show that there is a definite and constant increase in the number of endotracheal intubations for anesthesia.[2] The development of modern surgery has set new requirements for anesthesia. In many operations intubation is not only a method of choice but also the only reasonable anesthetic procedure. With new muscle relaxants, such as succinylcholine chloride, the technic of endotracheal intubation has become much easier, and some new inhalation agents which are more exactly administered via endotracheal tube have developed a tendency of overuse if not abuse of that procedure. It is often forgotten that endotracheal intubation is not always an innocuous manipulation but may have different detrimental effects which are very unpleasant and absolutely unnecessary for the patients who have come for simple operations. This study shows that safe anesthesia may be administered without it. We have come to a point where an anesthesiologist will very often show his competence much more by giving safe anesthesia without than by intubating a patient.

With use of new short-acting muscle relaxants endotracheal intubation has become relatively easy. However, at the same time these agents facilitate administration of safe anesthesia without intubation. This study shows that most of the commonly done surgical procedures in general surgery departments may be safely done without intubation and that some of its detrimental effects can in that way be avoided.

In this series we had damage of the nasopharyngeal mucosa in several cases but no other complications caused by the intubation. One case of cardiac arrest occurred during the open-chest surgery after anesthesia was satisfactorily stabilized and was probably not related to endotracheal intubation, although it might have been related to poor management of the anesthesia. However, it was successfully resuscitated. It should be emphasized that during the time of this study there were no fatalities due to anesthesia, no deaths in the operating room from any cause, and no complications related to the airway in any of the patients that were not intubated.

Conclusions

Endotracheal anesthesia has become commonplace, and its frequency of use continues to increase. This growth is caused by the demands of developments in surgery as well as by the use of new drugs and technics introduced into anesthesia. Many intubations performed today for different operations are not necessary. The number and magnitude of detrimental effects of endotracheal intubation are big enough not to be overlooked. Safe anesthesia in many operations as shown in this study may be administered without intubation. Endotracheal intubation is not the proper first step toward ventilation of the lungs for purposes of resuscitation.

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A Superior Iodide Preparation for Respiratory Tract Diseases, Iodopropylidene Glycerol (Organidin)

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THE USE OF IODIDES in respiratory diseases has been well established for many years, although I feel that perhaps we use the iodides too sparingly at times, caught in the web of the "wonder drugs." It is sometimes wise to reëvaluate old drugs in the light of newer pharmacologic advances.[1] This has been dramatically illustrated in the past with digitalis, ephedrine, and the Rauwolfia compounds.

Iodopropylidene glycerol (Organidin) has been used since 1915 as an organically-bound iodide preparation. To most physicians, including those in the fields of chest diseases and allergy, Organidin is merely thought of as a little more elegant form of the old reliable, saturated solution of potassium iodide, a little better tolerated perhaps, but that is all. This had been my viewpoint until I had the opportunity of placing a series of patients who needed iodides on Organidin. This was done for 1 year, and the results were compared with my previous results from potassium iodide. While I was aware of the fact that the organic iodides were better tolerated, I was surprised by some of the outstanding advantages of Organidin, which became evident during the course of its regular usage during the year in all types of routine and difficult cases of respiratory diseases, including bronchial asthma, asthmatic bronchitis, emphysema, bronchiectasis, chronic sinusitis, vasomotor rhinitis, and even in cases of the "common cold" in allergic individuals. This report is an attempt to summarize my experiences with the use of Organidin as compared with my previous usage of saturated solution of potassium iodide.

COMPARISON OF IODINE CONTENT OF 5 PER CENT ORGANIDIN SOLUTION AND SATURATED SOLUTION OF POTASSIUM IODIDE

Saturated solution of potassium iodide is made by dissolving 30 Gm. of potassium iodide in 21 c.c. of water, resulting in 30 c.c. of saturated solution of potassium iodide. This has been the backbone of our previous iodide therapy. One c.c. of saturated solution of potassium iodide contains 760 mg. of iodine, or about 50 mg. in each drop of the solution. By comparison, Organidin is a complex mixture of organic iodine derivatives, resulting from the interaction between iodine and glycerine. The commercial product consists of 5 per cent solution containing various mixtures of iodopropylidene glycerol. This product has no inorganic iodides, no free iodine and no alcohol, and is quite stable. One c.c. of the 5 per cent Organidin Solution contains 25 mg. of iodine, and 1 drop of the Organidin Solution contains 1.5 mg.; the difference between 1.5 mg. and 50 mg. of iodine per drop is a vital point in understanding some of the advantages of the Organidin Solution over saturated solution of potassium iodide. This lower iodine content of Organidin, as compared to saturated solution of potassium iodide, results in several obvious advantages. In the first place, there is much less gastric upset and in the second place a lowered incidence of iodinism, which is well illustrated by table 1.

TABLE 1

Comparision of Effect of Organidin and Saturated Solution of Potassium Iodide

	Drug Reactions (Iodinism)	Thyroid Enlargement	Preferred Other Drug	Failures Helped by Other Drug	Gastric Upset
100 consecutive cases using Organidin (10 drops 3 times a day)	0	0	2	0	0
100 cases using saturated solution of potassium iodide (10 drops 3 times a day)	4	3	98	20	5

While it is easy to understand that because of the lower iodine content, Organidin Solution would be better tolerated, and while the stability of Organidin is an advantage for the patient and the pharmacist, there are other advantages which are difficult to explain, merely on the basis of iodine content. During the course of the usage of this drug we gradually became aware of the fact that a number of patients responded to Organidin who did not respond to any dosage of potassium iodide solution. In searching for the explanation for this we were first given a clue by the statements of mothers of children who were taking the Organidin Solution. Many of these parents claimed that the children slept better and were more relaxed than ever before, and questioned whether Organidin was a tranquilizer. While it may be claimed that when an asthmatic is relieved and can breathe better he will become less tense and anxious and will sleep better, we have not seen this "relaxation" effect at any time with the most successful use of potassium iodide solution. This observation has now been scientifically explained by Berger[2, 3, 4] in his investigations with certain simple monoethers of glycerol, which were shown to cause a transient paralysis of the voluntary skeletal muscles without embarrassment of respiration. In smaller doses these glycerols had a controlling influence on various types of tremors and other involuntary movements as well as a relaxing effect on spasm, spasticity and rigidity. Thus it can be seen that apparently Organidin in addition to having the mucolytic, expectorant action of the iodides also has some mild, muscle-relaxing properties of the glycerol molecule similar to glyceryl guaiacol, which is helpful in bronchospasm.

EFFECT OF IODIDES AND ORGANIDIN ADMINISTRATION ON PROTEIN-BOUND IODINE (PBI)

Studies have shown that the least amount of iodine able to raise the protein-bound iodine in humans was a minimum of 7 mg. per Kg.[5] This elevation occurs in about 1/3 of the patients after the daily use of .6 Gm. of potassium iodide, for 4 to 7 weeks. This amount of iodine is contained in 10 drops of the saturated solution of potassium iodide per day, well below the therapeutic dose. By comparison, the daily administration of 100 drops of Organidin Solution would provide a total iodine intake of 4 mg. per Kg. in a 50 Kg. subject. Thus the highest Organidin dosage recommended contains about one-half the amount of iodine which would be required to cause a minimum increase of the protein-bound iodine in patients with normal thyroid function. Clinically this has also been quite evident; during the past few years we have averaged 3 to 5 cases per year of enlargement of the thyroid among asthmatics who were using potassium iodide. Although this enlargement responded to stopping the use of iodide or to the additional help of thyroid medication, this was a disturbing problem. Since the replacement of the potassium iodide with Organidin we have not had a single case of enlargement of the thyroid. In addition, a spot check with protein-bound iodine tests in about 10 per cent of these patients, who were on long-term usage of Organidin, revealed all of them to have results within normal limits.

There are other varied uses for this versatile iodide preparation. We have found Organidin, straight from the bottle, an excellent therapeutic aerosol for asthma, emphysema and asthmatic bronchitis. The glycerol aids in producing a stable aerosol of small-particle size, and the iodide is nonirritating and acts to liquefy tenacious sputum. This can be used by itself or added to any of the usual epinephrine or Isuprel aerosols.

The older physician is well aware of iodide as a "cold pill." Before the "up start" antihistamines took the stage as "cold tablets" iodides were frequently used in cold remedies. We have found that the antihistamines frequently produce inspissated mucus, particularly in asthmatics, and we have been using Organidin in tablet form as an alternative for the antihistaminic cold tablet and have found it quite effective for relief of the stuffy nose and sore chest without the risk of producing tenacious sputum.

In short, here we have a useful iodide preparation which has all of the virtues of iodine therapy with many of the side-effects reduced and perhaps some additional properties and advantages not found in the older preparations. Organidin has become our first choice for long-term iodide therapy.

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The Brittle Nail*

Its Treatment and Prevention with Gelatin

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THE GROWTH RATE of the fingernails has been studied intensively, especially as a possible index of under- or overnutrition in the adult.[1-4] A recent review was made by Babcock,[3] who compared methods used in measuring the rate of nail-growth. He also found that the rate is a function of age, increasing from infancy to adolescence, and decreasing gradually to approximately the age of 70. The rate of fingernail elongation was found to be somewhat slower for each age in females.[2, 5] The rate of fingernail growth in man has been estimated to be between 0.085 and 0.125 mm. per day.[6] Apparently the general body nutrition does not play an important part in the rate of nail-growth,[2, 7] although severe cold,[8] illness,[9] and prolonged starvation[7, 10] can reduce it. Nail-biting or playing the piano augments the rate. This may be due to mechanical factors.[2, 11, 12, 13]

Hillman[5] has claimed that there is no seasonal variation in the rate of nail-growth. He found that the rate was unaffected by minor illnesses and changes in work or dietary habits and unrelated to height or weight.

No data are available on the effects of local environment, such as contact with water, detergents, etc., on the rate of growth or on the physical condition of the nails—splitting, cracking, ridging, laminating, or excessive softness or brittleness. The physical condition of the nails is often altered during severe disease,[14, 15] and this factor may be of diagnostic value. Nail-growth is slowed as a result of the viral infection due to mumps[16] or to measles but not to tuberculosis.[9] There is an increased rate of nail-growth during pregnancy,[17] presumably as a consequence of the general enhancement of growth processes. However, the types of nail defects studied, data on which are detailed herein, have no apparent source, such as disease, nutritional status, or the immediate environment.

MATERIALS AND PROCEDURE

Previous studies[18, 19, 20] have been reviewed recently by Schwimmer and Mulinos,[21] who reported on the salutary effects of gelatin on the common fingernail defects seen in their normal subjects. Their data showed that more than 80 per cent of 17 nurses with nail defects were improved by the daily ingestion of 7.0 Gm. of a food-grade gelatin for from 11 to 16 weeks. The only shortcoming of this and other studies was the absence of data from a control group of subjects observed during the same period. Such a control could have shown seasonal or other unknown causes which might have contributed to the correction of the nail defects ascribed to the gelatin.

Our plan of study included accounting for both a seasonal influence and a spontaneous change in the condition of the nails, irrespective of regimen. For most of the subjects the effects of a full dose of gelatin were compared with those from a capsulated placebo, as well as those from a much smaller amount of gelatin, given in capsule form. Previous experience[19, 20, 21] had indicated that a daily dose of gelatin of approximately 7.0 Gm. was required to be given for from 8 to 16 weeks in order that a definitive effect could be shown. However, no formal study had been undertaken wherein the effects of a placebo, a smaller dose of gelatin, and the presently accepted daily dose of at least 7.0 Gm. of gelatin were recorded simultaneously in 3 groups of patients.

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* Read before the Third Annual Meeting of the Noah Worcester Dermatological Society in Las Vegas, Nevada, March 24, 1960.

For our study we chose 66 adults, mostly females, special attention being given not to include nail defects due to fungous infections, psoriasis, or to obvious endocrine disturbances. Apparent willingness of a subject to continue on the regimen was required, but otherwise there was no selection. The subjects were assigned to the following regimens: (a) 20 controls taking 1 placebo capsule 3 times a day, (b) 20 taking 1 (0.6 Gm.) gelatin capsule 3 times a day, and (c) 26 taking the full contents of 1 (7.0 Gm.) envelope of gelatin once a day. The majority of subjects were continued under observation through 2 seasonal periods of 18 to 24 weeks, 1 group beginning in the spring and the other in the winter.

Each subject was questioned thoroughly regarding work habits and the history of the type of nail defect evident on examination. A photograph was made of the involved fingers, and a detailed briefing was made regarding the significance of the regimen to which she would be subjected and the desirability of continuity in the treatment. She was also given a chart upon which to record the daily condition of her nails. The nails of all subjects were examined at approximately monthly, and sometimes weekly, intervals, during which an estimate was made by the physician of the degree of change. Each subject's opinion of the effectiveness of the regimen was also recorded. At the sixteenth to the twentieth week of observation another photograph was made of the nails.

RESULTS

Most of the subjects were studied through 2 seasonal periods. The tabulation of the results in this way insured the recognition of any seasonal effect, while the periods were sufficiently long to allow complete replacement of the nails.

In table 1 the results are recorded as 2+ to 4+ for a definite improvement and as 1+ for a slight or equivocal effect.

TABLE 1

Analysis of Three Regimens on the Brittle Fingernail

Degree of Improvement	Spring		Winter		Combined Seasons		T.I.*
	No.	Per cent	No.	Per cent	No.	Per cent	
	Gelatin Powders, 7.0 Gm./day—26 patients						
2+ to 4+	10	59	17	77	27	69	4.93
1+	3	18	3	14	6	16	—
0	4	23	2	9	6	16	—
Total trials..	17		22		39		
	Gelatin Capsule, 0.6 Gm., 1 t.i.d.—20 patients						
2+ to 4+	4	21	6	30	10	26	1.86
1+	4	21	3	15	7	18	—
0	11	56	11	55	22	56	—
Total trials..	19		20		39		
	Placebo Capsule, 1 t.i.d.—20 patients						
2+ to 4+	2	12	3	17	5	14	1.00
1+	4	24	6	33	10	29	—
0	11	64	9	50	20	57	—
Total trials..	17		18		35		

* Therapeutic Index, compared to the placebo control.

In a study of this kind it is important to use as high a degree of objectivity as possible, because it is difficult to examine the subjects over such prolonged periods (table 2) without becoming aware of the regimen being used. We employed 3 sets of observations for the judgment of the condition of the fingernails: (1) the examining clinician's impression at each examina-

TABLE 2

Length of Treatment for Each Regimen

Months	No. Patients		
	G	C	P
3–5	9	0	3
6–10	6	4	5
Over 10	11	16	12

Legend:
G—Gelatin, 7.0 Gm./day, single dose.
C—Capsules with 0.6 Gm. gelatin, t.i.d.
P—Capsules of placebo, t.i.d.

tion, (2) the patient's personal record which was submitted during each visit, and (3) the patient's expression of satisfaction with the results, judged by replies to close questioning, volunteered remarks, and comparison of the effects of the current regimen with previous experience.

There was marked agreement on the occurrence of improvement among the 3 sources of information but less agreement regarding the amount of change. We are confident that the overall estimate of change was reliable, because, in addition to the care used in collecting the data, the final records for each patient were analyzed and collated by a physician who had never seen the patients and did not know which preparation had been given. Code numbers were used for each preparation, thus lessening any chance of bias on the part of the analyst.

The results of the analysis of the data are shown in tables 1 and 2 and figure 1. Table 1 shows the estimated improvement in all subjects, by season, at the end of each observation period. When the treatment with each regimen exceeded 8 months, 2 estimates of improvement were reported, based on the season during which the observations were made. This subdivision was dictated by our desire to account for a seasonal effect on the nails, if any, and by the necessity for considering the effects of each regimen during 1 full growing period of the nails, estimated at 13 to 20 weeks. This division also made it possible to compare our data with those reported by others for similar periods.

The data on the placebo (Group P), shown in table 1 and figure 1, supply information on the spontaneous variations in the degree of nail defects which occurred over a period of approximately 1 year. In confirmation of the work of others we found the single daily dose of 7.0 Gm. of gelatin (Group G) to be convenient to take and superior to the other 2 regimens in correcting the nail defects presented by our subjects.

It is seen from table 1 that the placebo capsules effected a change for the better in less than half of the subjects, and the results from a small dose of gelatin given in 3 divided doses were no better than the placebo. In contrast, the group treated with a single daily dose of 7.0 Gm. of gelatin showed approximately twice as many subjects with improvement of the nails, the improvement being much greater than with the other regimens.

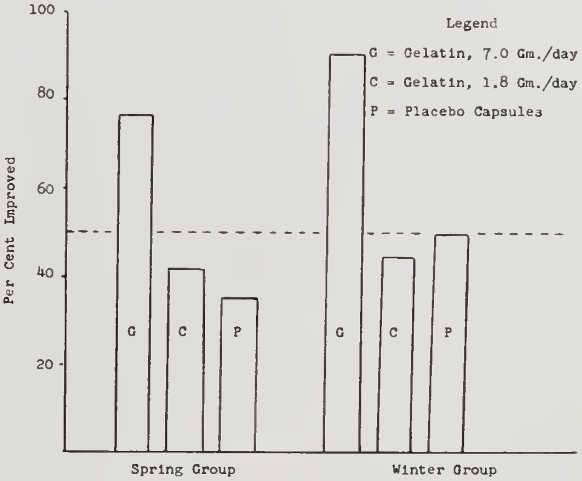

FIG. 1. Results of gelatin therapy in 66 patients.

Study of the definitely improved subjects, regardless of season, revealed that 69 per cent of the full-dose gelatin treated group were in the 2+ to 4+ categories, compared to 26 per cent for the gelatin capsule group and 14 per cent for the placebo. This shows a 2½- to 5-fold improvement in degree attributable to the administration of the larger dose of gelatin, compared to the other regimens.

The differences between the spring and winter groups are considered as insignificant in this relatively small number of subjects. The results of this study agree rather well with those of Schwimmer and Mulinos,[21] who reported, "The fingernails of more than 80 per cent of 17 otherwise healthy subjects were improved by the ingestion of 7.5 Gm. of gelatin per day for from 11 to 16 weeks."

Discussion

In the treatment of the brittle fingernail the beneficial effects of 1 envelopeful of gelatin taken daily have not been explained adequately. Schwimmer and Mulinos[21] suggested that the gelatin increases the presumably diminished blood flow at the nail bed through the specific dynamic action (SDA) it is known to exert. That an SDA effect can be thermogenic has been demonstrated through the use of individual amino acids.[22] Beavers and Covino[23] showed that a 5 per cent solution of glycine was superior to a 5 per cent solution of glucose in delaying the rapidity with which a lethal hypothermic state was attained and in augmenting the rate of rewarming in dogs already hypothermic. This effect was ascribed solely to the SDA of glycine. The gelatin used in obtaining our data contains over 50 per cent of amino acids with a high SDA, and this may explain the observed effectiveness of gelatin.

In addition, a more direct effect on the nail structure may be ascribed to gelatin, as suggested by the data reported by Rosenberg et al.[19, 20] These observers obtained evidence of nail improvement after several weeks of daily gelatin administration in a time too short for complete regrowth of the nails. This effect of gelatin could be mediated only from the vascular nail bed at its attachment to the nail, rather than from the growing nail base. More direct evidence for this observation has been furnished by Godwin.[8] Using cystine labeled with S^{35}, and making autoradiographs of the rat's claw, he found that within an hour or two a considerable quantity of the cystine appeared in the keratinized cells throughout the nail substance. Atabrine also had been observed to diffuse into and stain the whole nail, rendering it fluorescent aftes a short period of systemic administration.[19] This furnishes further evidence that amino acids and nutrients can diffuse directly from the blood stream into the already formed and presumably dead nail.

The administration of a placebo capsule served to encourage the control group to continue with the medication, despite the lack of effect in the majority of cases. The capsules of gelatin given 3 times a day furnished a total dose of 1.8 Gm. of the protein, or about one-quarter of the dose of 7.0 Gm. used in the gelatin group. The patients receiving the 1.8 Gm. dose showed an incidence of improved fingernails almost double that of the placebo but only one-third as much as the full dose of gelatin. In order to obtain the full effect of the gelatin with the capsule form it would have been necessary to administer about 12 capsules a day.

Summary and Conclusions

Data have accumulated which indicate that the daily ingestion of gelatin reduces the incidence of nail defects in normal subjects. A dose-response relationship points to 7.0 Gm. per day, taken at one time, as the optimal dose.

Considering all degrees of improvement in the condition of the fingernails, there was no significant difference in the percentile improvement between 2 groups of 20 subjects, 1 receiving 1 (0.6 Gm.) capsule of gelatin, the other a placebo capsule, 3 times a day.

When the results were separated into those showing a definite effect (2+ to 4+) and those with a slight to no effect (1+ to 0), a difference was revealed between the gelatin capsules (26 per cent improvement) and the placebo capsules (14 per cent improvement).

The daily administration of 7.0 Gm. of gelatin as a single dose resulted in much improvement in 69 per cent of 39 seasonal trials on 26 subjects. This improvement was 5 times greater than in the placebo controls and over 2½ times that of the smaller dose of gelatin.

A seasonal waxing and waning in the condition of the nails was demonstrated in our group of 66 subjects. The winter season was associated with more spontaneous improvement and a better response to the gelatin than the spring season.

No acceptable theory is available to explain the positive effect of gelatin. The specific dynamic action of the gelatin would induce a vasodilating action on the nail bed, if we postulate an ischemic origin to the nail defect. The fact that nutrients can enter the dead nail directly from the blood supply underneath suggests that a nutritional factor may be supplied by the gelatin which strengthens the structure and lessens brittleness, lamination, and splitting of the fingernails.

ACKNOWLEDGMENT: We are indebted to Dr. D. Tourtellotte of the Charles B. Knox Gelatine Co., Inc., for the supplies of gelatin used in this study and for the placebo capsules.

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The Use of Triamcinolone Acetonide Spray in the Treatment of Common Dermatoses

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THE MANAGEMENT of the signs and symptoms of inflammation, including erythema, edema, and associated pruritus, is often the principal therapeutic goal in the treatment of many common dermatoses. In other skin diseases control of these bothersome and sometimes incapacitating manifestations is often an indispensable adjunct to therapy. Since the adrenocorticosteroids possess remarkable capability for controlling the inflammatory response and its troublesome clinical manifestations, their use in systemic and topical formulations has practically revolutionized dermatology in the past decade.

One of the newer corticosteroid derivatives, triamcinolone acetonide, excels in its capacity to control the inflammatory reaction. In laboratory studies on adrenalectomized rats it exhibits 40 times the anti-inflammatory activity of hydrocortisone acetate, 10 times that of prednisolone, and 10 times that of triamcinolone alcohol.[1, 2] In gluco-corticoid activity it is 92 times more potent than cortisone acetate and 9 times more potent than triamcinolone alcohol. Clinical studies with cream, ointment and lotion formulations have proved triamcinolone acetonide to be superior to other topical steroid medicaments such as hydrocortisone,[3-7] prednisolone,[8] and fluorometholone in the treatment of many common skin conditions.

One of the most recently developed topical formulations of triamcinolone acetonide is an aerosol spray identified as Kenalog Spray.* In the study about to be presented Kenalog Spray was tested for efficacy in the treatment of 44 patients with 16 different dermatoses commonly encountered in dermatologic practice.

Materials and Methods

The 44 unselected patients were seen in private office practice. The group consisted of 20 males and 24 females who ranged in age from 2 to 65 years, but only 7 of the patients were under 20 years of age. Sixteen different disease entities were presented (table 1). As to the severity of the dermatoses seen in this group, 1 was graded as mild, 23 as moderate, 3 moderate to severe, 14 severe, and 3 unclassified. The duration of illness had varied from a few days to several months in most patients. In others, however, the condition had been present or had recurred off and on for a period of years.

Kenalog Spray was applied to the lesions 2 or 3 times a day. Therapy was continued for a few days or weeks in some subjects and up to several months in others, depending on the clinical response and nature of the disease.

Previous therapy included X-ray treatments, oral steroids, and a wide variety of topical medications and soothing compresses. Conjunctive therapy which was prescribed along with the Kenalog Spray consisted largely of supportive measures. Oral steroids were given to 3 patients, and topical steroid ointments were prescribed for several subjects.

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* The Kenalog Spray used in this study was kindly supplied by Dr. John T. Groel of the Squibb Institute for Medical Research, New Brunswick, New Jersey.

TABLE 1

Results of Treatment with Triamcinolone Acetonide Spray (Kenalog Spray)

Diagnosis	No. of Patients	Response to Therapy					Unwanted Reaction	Remarks
		Excellent	Good	Fair	Poor	No Follow-up		
Dermatophytosis with secondary eczematization	2	2	0	0	0	0	0	Eczema cleared rapidly; started on oral antifungal antibiotic, Griseofulvin
Lichen planus	1	1	0	0	0	0	0	This patient had not responded to other topical steroids.
Lichen planus hypertrophicus	1	0	1	0	0	0	0	This patient had been treated unsuccessfully for years with every possible therapy.
Lichen planus atrophicus	1	0	0	1	0	0	0	Pruritus relieved but lesions persisted
Lichen simplex chronicus	5	4	0	0	0	1	0	
Erythema perstans	2	1	1	0	0	0	0	One patient had recurrence of symptoms when therapy was discontinued.
Nummular eczema	6	4	2	0	0	0	0	Two patients had recurrences when therapy was stopped.
Pruritus ani	2	1	1	0	0	0	0	Lasting and satisfying relief
Pruritus vulvae	2	0	1	0	1*	0	0	One patient experienced a recurrence when therapy was stopped.
Dermatitis medicamentosa	3	1	1	1	0	0	1	One patient complained that the spray burned.†
Neurodermatitis of eyelids	1	0	1	0	0	0	0	
Dermatitis seborrheica	2	0	1	1	0	0	0	One patient had a recurrence when therapy was stopped.
Intertrigo	2	2	0	0	0	0	0	
Dermatitis of the hands, eczematous	2	0	0	0	2	0	1	One patient experienced a flare-up of lesion from spray.
Dermatitis, contact	8	7	1	0	0	0	0	
Dermatitis, atopic	4	2	2	0	0	0	1	One patient complained that spray burned; 1 had recurrence when therapy was halted; 1 obtained relief from pruritus but rash persisted.
Totals	44	25	12	3	3	1	3	

* This patient presented a psychogenic factor.

† Patient had used a number of unprescribed remedies.

Evaluation of the response to Kenalog Spray was made on the basis of subjective reactions as revealed by the patient under questioning and objectively by examination.

RESULTS

Of a total of 44 subjects in this series, 25 (56 per cent) exhibited excellent responses to treatment with Kenalog Spray, 12 (27 per cent) manifested good responses, 3 (6 per cent) had fair responses, 3 (6 per cent) had poor responses, and 1 patient did not return for follow-up examination.

Kenalog Spray appeared particularly useful in the patients with contact dermatitis, nummular eczema, lichen simplex chronicus, atopic dermatitis, and intertrigo. One patient with lichen planus who had not benefited from treatment with other topical steroid preparations, and 1 patient with lichen planus hypertrophicus of many years' standing, who had been treated previously with many types of medication, obtained excellent results with Kenalog Spray.

Kenalog Spray relieved pruritus rapidly, one of its chief advantages. The majority of patients found this formulation pleasant and easy to use except for 2 patients who complained of burning on administration.

One patient developed a flare upon administration of the medication. This was the only unwanted effect seen throughout the study. In 6 of the patients (2 with nummular eczema, and 1 each with erythema perstans, pruritus vulvae, seborrheic dermatitis, and atopic dermatitis) the rash recurred when therapy was discontinued.

COMMENT

Kenalog Spray is a highly useful agent in the treatment of many common inflammatory and allergic dermatoses. Its unique ability to relieve symptoms, most particularly the pruritus attendant in many of these skin diseases, contributes substantially to the patient's comfort and well-being. With its use, rapid subsidence of inflammation, itching and associated edema ensues. The use of an aerosol spray eliminates the need for applying the medication to the lesion with the fingers or an applicator. The mode of administration is clean, easy, and adaptable for use in hairy or otherwise inaccessible zones.

SUMMARY

Out of a series of 44 patients with 16 different dermatologic conditions treated with Kenalog Spray, 25 (56 per cent) exhibited excellent responses, 12 (27 per cent) manifested good responses, 3 (6 per cent) had fair responses, 3 (6 per cent) had poor responses, and 1 subject did not return for follow-up examination.

One patient had a flare-up of the lesion upon the application of Kenalog Spray, and 2 others complained that the spray burned the skin; otherwise no unwanted reactions were observed in the course of this study.

Kenalog Spray provided highly efficacious relief from the symptoms of inflammation, pruritus, and associated edema in a number of dermatoses, but most, particularly, in contact and atopic dermatitis, nummular eczema, lichen simplex chronicus, and intertrigo.

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Diabetes Insipidus—a Review with Presentation of Two Cases in Children*

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THE DISEASE is called diabetes (siphon) because the fluid does not remain in the body, but uses the man's body as a ladder, whereby to leave it."[1] Although this classical description of diabetes is more than 1,700 years old, it was less than 300 years ago that diabetes insipidus was differentiated from diabetes mellitus by the fundamental procedure of tasting the urine.[2]

Diabetes insipidus is a rare condition and little was known of its pathogenesis until about 50 years ago. Since then considerable investigation has permitted a fundamental understanding of the disease.

The neurohypophysis may be considered a physiologic functioning unit consisting of the median eminence of the hypothalamus, the infundibulum (stalk), and posterior lobe of the pituitary (figure 1).[3] Most of the nerve fibers within the infundibulum arise in the supra-optic nuclei of the hypothalamus and are designated the supra-opticohypophyseal tract. Other fibers in the same tract arise in the paraventricular nuclei and perhaps in other less well-defined nuclei. Since these nuclei are linked via subthalamic-thalamic nuclei to the cerebral cortex as well as to sympathetic and parasympathetic centers, their function is influenced by many factors.

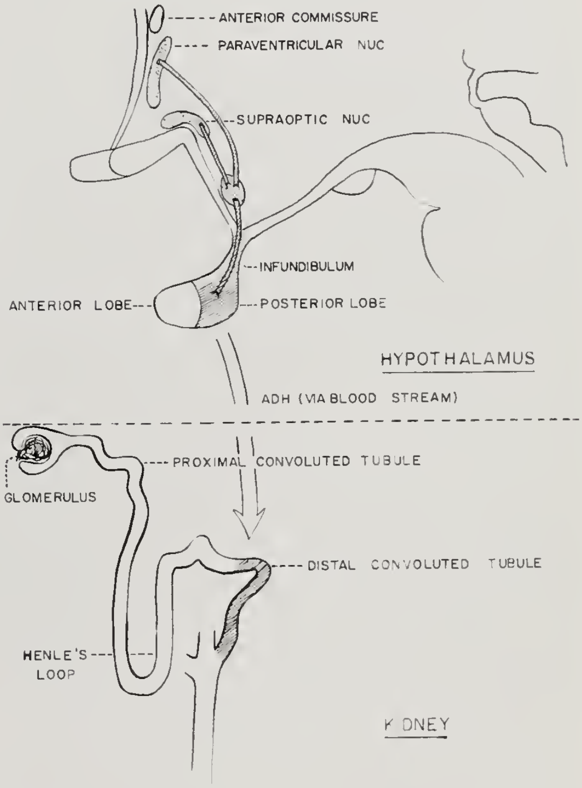
ANTERIOR COMMISSURE
PARAVENTRICULAR NUC
SUPRAOPTIC NUC
INFUNDIBULUM
ANTERIOR LOBE
POSTERIOR LOBE
HYPOTHALAMUS
ADH (VIA BLOOD STREAM)
PROXIMAL CONVOLUTED TUBULE
GLOMERULUS
DISTAL CONVOLUTED TUBULE
HENLE'S LOOP
KIDNEY

FIG. 1. Neurohypophysis and its relation to the kidney.

The hormones of the neurohypophysis are secreted by the cells of the hypothalamic nuclei.

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These hormonal secretions are transported along unmyelinated infundibular nerve tracts to the posterior lobe of the pituitary, which acts as a storehouse. Extracts of postpituitary substance have been shown to contain vasopressin or ADH, which has a marked antidiuretic but minimal pressor effect, and oxytocin, which is a powerful contractor of smooth muscle, especially that of the uterus. Du Vigneaud[4] was able to isolate and identify these hormones as octapeptides of similar structure:

Oxytocin (ox): Cysteine - tyrosine - isoleucine - glutamic acid-aspartic acid-cysteine-proline-leucine-glycine
Vasopressin (ox): Cysteine-tyrosine-phenylalanine-glutamic acid-aspartic acid-cysteine-proline-arginine-glycine

An unusually rich capillary supply in close contact with certain cells of the hypothalamic nuclei favors their presumed function as osmoreceptors. When the osmolarity of the plasma decreases, the secretory activity of these cells is diminished. This results in increased urine output. Conversely, when the plasma osmolar concentration increases, more antidiuretic hormone is produced and released. Urinary production then decreases.

ADH principally affects the total volume of urine. About 125 c.c. of fluid per minute is formed by glomerular filtration, but only 1 c.c. of urine per minute is produced. About 85 per cent of the glomerular filtrate is reabsorbed by obligation in the proximal tubular system; the remainder is facultatively reabsorbed in the distal convoluted tubule under the influence of ADH (figure 1). The postpituitary hormone promotes active resorption of water alone and has no direct effect on sodium.[5] The hormone is rapidly inactivated by the liver and spleen. An increase in the amount of antidiuretic action in the urine is demonstrable in cases of severe liver disease.[6] Although increased postpituitary activity has been suggested as a factor in the development of essential hypertension[7, 8] and eclampsia,[9] it is very doubtful that ADH plays any role in the etiology of these conditions. If ADH is secreted in a continuously inappropriate manner, it leads to syndromes characterized by hyponatremia as seen in certain patients with central nervous system disease and "cerebral salt wasting."[10, 11]

Organic diabetes insipidus may be produced by bilateral destruction of any part of the hypothalamo-neurohypophyseal system. When lower areas in the system are damaged, however, the resulting disease is usually not too severe. Like other endocrine organs, the neurohypophysis functions competently even after a considerable number of its cells or neurotropic fibers are destroyed. About 90 per cent of the cells of the hypothalamic nuclei must be damaged before severe diabetes insipidus occurs.[12]

Polyuria in organic diabetes insipidus persists only if the anterior lobe of the pituitary is intact. The diuretic action of the adenohypophysis is mediated through its tropic effect on the thyroid and adrenals and is due chiefly to maintenance of general metabolism rather than specific diuretic action.[13] Amelioration of the symptoms of diabetes insipidus by extirpation of the anterior pituitary is perhaps analogous to the improvement of diabetes mellitus observed in the Houssay animal.[14]

Symptoms and Signs

The clinical features of diabetes insipidus can be explained by a deficiency of ADH. This results in the excretion of a very large amount of dilute urine. The daily output averages 5 to 10 liters and may be much higher. In older children enuresis may be an early symptom.[15] The onset of symptoms is usually abrupt.[16] There are no other symptoms provided adequate fluids are consumed. When fluid is restricted, however, severe dehydration with all of its clinical manifestations ensues. Some patients with polyuria develop markedly increased bladder capacity. In these persons urinary frequency is not a complaint.

Abnormal laboratory findings in a patient with diabetes insipidus in fluid balance are restricted to the urine.[17] Total volume is markedly increased and osmolar concentration extremely low. The specific gravity is between 1.001 and 1.007 and even with forced withholding of fluids can rarely be increased above 1.012. Specific gravity greater than 1.012 suggests either a partial deficiency of ADH,[16] or a diagnosis other than true diabetes insipidus. Kidney function tests are normal, but renal plasma flow is diminished and the filtration fraction slightly increased.

The underlying disease itself may, of course, produce additional symptoms. For example, signs of increasing intracranial pressure suggest a space-occupying tumor, and irregularities in temperature control and obesity may indicate widespread hypothalamic involvement.

ETIOLOGY

Any appropriately situated brain tumor may cause diabetes insipidus by damaging a portion of the neurohypophyseal system.[18] A primary tumor of the neural lobe or infundibulum is very rare. Metastatic carcinoma, especially from the breast,[19] may produce the disorder. Osseous implantation in the sella turcica is more common than direct metastasis to the neural lobe. Suprasellar craniopharyngioma (Rathke's pouch tumor) is a not uncommon cause of the syndrome.

Second-stage syphilitic involvement of the basal meninges or gummas strategically located may cause diabetes insipidus. Infrequently it may result from tuberculous meningitis or tuberculoma. Sarcoidosis and actinomycosis are rare etiologic factors. Encephalitis may involve the hypothalamus and neurohypophysis producing diabetes insipidus, and some think this is the most common cause.

Of unknown etiology, Hand-Schüller-Christian disease is a noninfectious granulomatous reticuloendotheliosis. It is related to fulminating Letterer-Siwe disease and benign eosinophilic granuloma of bone.[20] Diabetes insipidus is often the first sign of Hand-Schüller-Christian disease. However, the classical triad is uncommon.

"Idiopathic" diabetes insipidus constituted the majority of cases in a recent classification of 124 cases.[21]

A few familial cases of the syndrome have been reported. The symptoms begin in early infancy and persist throughout life without affecting the patient's general health or longevity.[22] This disease is thought to be transmitted as an autosomal dominant,[23] although a few pedigrees are known in which a sex-linked recessive gene with poor penetrance appears likely.[24]

Most other cases of "idiopathic" diabetes insipidus may be the result of subclinical encephalitis[22] rather than a "primary degeneration of the supra-opticohypophyseal system."[21] However, it must be emphasized that "idiopathic" diabetes insipidus may precede other signs of tumors or reticuloendotheliosis by months and years.[20]

Diabetes insipidus may occur with hydrocephalus and pellagra. It may be due to developmental abnormalities of the hypothalamus which are at times associated with other congenital physical and mental defects as in the Laurence-Moon-Biedl and Fröhlich's syndromes. Trauma, such as gunshot wounds and basilar skull fractures, produces the syndrome by damaging the infundibulum.

Intracranial surgery of the pituitary gland or adjacent areas frequently causes the disorder.[16] Permanent polyuria and polydipsia in such cases are preceded by a "normal interphase" of water turnover due to a release of preformed antidiuretic hormone from the pars nervosa.[25]

DIFFERENTIAL DIAGNOSIS

A history of excessive fluid intake and prodigious urinary output suggests the diagnosis of organic diabetes insipidus. However, certain other conditions must be excluded.

Diabetes mellitus. Characteristic of diabetes mellitus is the presence of glycosuria, causing polyuria of high specific gravity. Polyuria and polydipsia cease when hyperglycemia is controlled by dietary measures and insulin. The simultaneous occurrence of diabetes insipidus and diabetes mellitus has been observed rarely.[26, 27] In such cases the specific gravity of the urine is low, even in the presence of glucose, because of the large increase in urine volume.

Renal disease. Late in the course of severe renal disease[28, 29] (such as hypercalciuria, potassium deficiency,[30] the deToni-Fanconi syndrome and cystinosis,[20] and nephrosclerosis) polyuria and polydipsia may occur. In addition to albuminuria and abnormal urinary sediment, the history, the presence of hypertension, retinal changes, and renal functional impairment will indicate the correct diagnosis. Pitressin has no effect in individuals with polyuria due to kidney failure.

"Nephrogenic" diabetes insipidus. First described by Williams,[31] nephrogenic diabetes insipidus is characterized by an intrinsic defect of the renal tubule, which results in an inability to reabsorb water in response to ADH. Mild mental and physical retardation may be present,[32] but no evidence of other renal defects has been found in these "water babies." Long thought to be transmitted as a sex-linked recessive trait,[23, 31] recent studies suggest that the defect may be passed as an autosomal dominant with decreased penetrance and expressivity in the female and variable penetrance in the male.[33] Like the Seabright-bantam syndrome (pseudohypoparathyroidism),[34] nephrogenic diabetes insipidus is another instance of the failure of an end organ to respond to the effects of normal or increased amounts of a hormone.

Polyuria and polydipsia of psychogenic origin. Some individuals acquire the habit of excessive drinking of fluids as a neurotic trait. The resulting symptoms are indistinguishable from true diabetes insipidus, except that a marked preference for ice water is frequently observed in the latter.[16] Further, compulsive water drinking occurs predominantly in hysterical menopausal women.[35]

"Diabetes insipidus-like syndrome." This unusual condition has recently been described[36] as having the same symptoms as true diabetes insipidus but from a different cause. In the "diabetes insipidus-like syndrome" there is adequate production of ADH but the hormone cannot be released into the blood stream due to some defect of the osmoreceptor system.

LABORATORY TESTS

In order to determine the mechanism of polyuria and polydipsia, routine blood tests including blood urea nitrogen and glucose levels should be performed. Examination of the urine, specific gravity, and sediment are mandatory. Renal function tests, roentgenograms of the skull and chest, serology test, and bone-marrow aspiration may be helpful.

In addition, several excellent tests have been devised which permit differentiation between polydipsia of psychogenic origin, true diabetes insipidus, and the "diabetes insipidus-like syndrome."

Plasma concentration. Random osmolalities obtained from the plasma show values greater than 290 m. osmoles per Kg. in organic diabetes insipidus but less than 275 m. osmoles per Kg. in compulsive water drinking.[37]

Response to Pitressin. Pitressin causes antidiuresis in all 3 types of polyuria (figure 2). However, the patient with psychogenic polydipsia continues to drink and may become overhydrated, while the patient with true diabetes insipidus stops drinking and is symptomatically improved.[37] This test may also be performed with a placebo.[16]

Carter-Robbins hypertonic saline test. The Carter-Robbins (Hickey-Hare) osmotic concentrating test[38] is generally used in preference to forced fluid restriction (Fishberg concentration test). After adequate hydration is established the urine flow per minute is determined. Following 2 control periods of 15 minutes each, 2.5 per cent sodium chloride solution is infused intravenously at the rate of 0.25 c.c. per Kg. per minute for 45 minutes. In normal individuals and in those with psychogenic polydipsia (and even in some with partial deficiency of antidiuretic hormone)[16] decrease of urinary flow is observed. Patients with true diabetes insipidus and the "diabetes insipidus-like syndrome" do not show this response (figure 2).

Nicotine-stimulating test.[36, 39] This is perhaps the most discriminating of all these tests but is contraindicated in patients with coronary artery disease.[40] Under conditions of constant hydration, 1 mg. of nicotine salicylate (3 mg. for smokers) is infused intravenously. In normal individuals, in subjects with neurotic polydipsia, and in those with the "diabetes insipidus-like syndrome," ADH will be released following nicotine administration and urinary flow will decrease. On the other hand, the patient with true diabetes insipidus will not show this positive response. The nicotine test distinguishes true diabetes insipidus from the "diabetes insipidus-like syndrome" (figure 2).

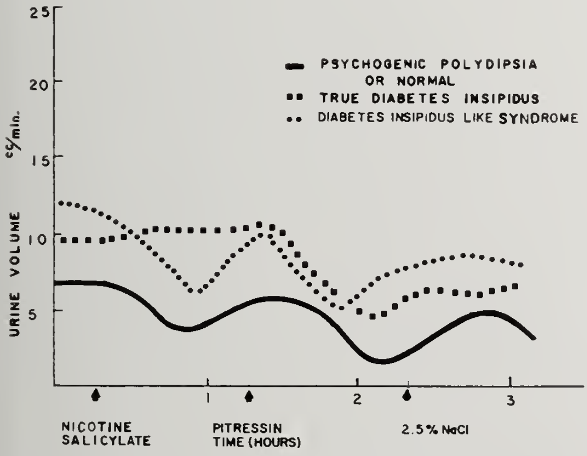

FIG. 2. Comparison of urinary response of 3 types of polyuria to sodium chloride, Pitressin, and nicotine.

TREATMENT

When possible, treatment is directed toward the underlying disease. If the disorder follows trauma, symptoms may be transient. In cases due to syphilis or tuberculosis, chemotherapy may be efficacious. Tumors can be treated surgically or with X-rays. In Hand-Schüller-Christian disease, diabetes insipidus is sometimes improved by roentgen therapy to the sella and therapy with folic acid antagonists. If treatment of the underlying disorder is impossible or ineffective, substitution therapy should be instituted as well as maintenance of adequate oral intake of fluid.

A prolonged suppression of polyuria may be obtained by administering Pitressin Tannate in Oil. Because of slow and gradual absorption, a therapeutic hormone level is maintained for 36 to 48 hours following a single intramuscular injection of 0.5 to 1.0 c.c. Because of individual variation in tolerance, the dose that can be administered without undesirable side-effects must be individualized. The injection is repeated when the therapeutic effect wanes. The use of Pitressin Tannate in Oil is thought by many to be the therapy of choice.[16, 22] Desiccated posterior pituitary may be given as "snuff." Some patients may not attain adequate hormonal levels without annoying side-effects by this route. Moreover, prolonged use may irritate the nasal mucosa, with subsequent impairment of absorption.[41] On the other hand, many patients, including children, may be satisfactorily treated with "snuff" for long periods of time without recourse to frequent injections. A diet low in sodium chloride reduces the amount of hormone required for the control of symptoms.[42]

Even though the water balance of the body is maintained by Pitressin therapy, the urinary specific gravity rarely exceeds 1.010. The reason for this is unknown, but it suggests either that the concentrating mechanism of the kidney is defective or that factors in addition to ADH are necessary for restoration of normal tubular concentrating capacity.[43]

Paradoxically, chlorothiazide drugs may have a place in treatment. Several patients with true diabetes insipidus and 1 with the nephrogenic type have been treated with chlorothiazide compounds. All responded with a prompt reduction in the volume of fluid intake and output.[44] Continuous treatment did not cause sustained sodium deficiency, hypotension or reduction in the glomerular filtration rate. However, potassium deficiency may occur. These drugs may well be indicated in patients with nephrogenic diabetes insipidus and in those with Pitressin intolerance or refractoriness.[45]

REPORT OF CASES

Case 1. An 8-year-old white girl was admitted to the Pediatric Service of the U. S. Naval Hospital, Bethesda, Maryland on August 8, 1960 because of polyuria and polydipsia of 6 months' duration. Previous to admission here the patient had been studied at other hospitals and a diagnosis of diabetes insipidus entertained. However, no specific medications were prescribed. Urinary excretion totaled 3 to 5 liters daily and intake exceeded this by 600 to 1,000 c.c. She had neither gained nor lost weight, although increased fatigue had been noted since the onset of symptoms.

The family history was noncontributory. A "convergent squint" had been corrected surgically at the age of 3. During the 8 months prior to admission the child had 3 viral diseases (measles, chickenpox and mumps). In each instance these diseases were typical, with no symptoms of overt encephalitis.

Physical examination revealed a well-developed but thin child in no acute distress. No significant positive findings were observed.

The blood urea nitrogen was 11.5 mg., sodium 136 mEq./L, chloride 100 mEq./L, CO_2, 25.2 mEq./L, glucose 70 mg., potassium 4.3 mEq./L, calcium 10.5 mEq./L, phosphorus 2.8 mEq./L, alkaline phosphatase 6 Bodansky units, and protein-bound iodine 5.8 mcg. Serological test for syphilis was negative. The white blood cell count was normal. The hematocrit was 34, and the hemoglobin 11.1 Gm. Sixty per cent of phenolsulfonphthalein was excreted at 15 minutes. Intermediate strength PPD was negative. X-ray films of the skull, chest and long bones showed no abnormalities. The urine was clear and acid and contained no sugar, albumin or cells. The specific gravity was 1.010 and remained between 1.001 and 1.010 on many determinations. After 12 hours of water restriction the specific gravity measured 1.008. When pitressin was administered the urinary volume decreased markedly. The Carter-Robbins test revealed no antidiuretic response to intravenous infusion of hypertonic saline. The nicotine-stimulating test was negative.

Since no underlying disease could be discovered, a diagnosis of idiopathic diabetes insipidus was made. Therapy with posterior pituitary powder insufflation 4 times a day was begun, and effective control of polyuria was attained.

Case 2. A 5½-year-old white boy was admitted to the U. S. Naval Hospital, Bethesda, Maryland on May 13, 1960. Eight months prior to admission he had developed increased water consumption (up to 4 to 5 liters per day), and accompanying this polyuria, nocturia, increased irritability, headache and weight loss were seen. Four weeks before admission he was allegedly struck on the left temporal region with a stone. A "lump" developed in the area of the injury.

The past history revealed that the child had frequent bilateral otitis media during infancy. During the preceding 2½ years he had 5 recorded episodes of purulent ear discharge, the last of these ending 2 months prior to the onset of the diabetes insipidus.

Physical examination disclosed a well-developed boy in no apparent distress. A 2 by 2 cm., soft, raised mass was noted on the left frontal region above and lateral to the supraorbital ridge. The remainder of the examination was normal.

Serum sodium was 140 mEq./L, chloride 99 mEq./L, potassium 4.1 mEq./L, calcium 10.6 mEq./L, and phosphorus 2.6 mEq./L. The blood urea nitrogen was 12 mg., glucose 88 mg., and CO_2 26.8 mEq./L. Alkaline phosphatase was 8 Bodansky units. Serologic test for syphilis was negative. The white blood cell count was normal except for 8 per cent eosinophiles. The protein-bound iodine was 4.7 mcg.; 17-ketosteroid excretion in a 24-hour period totaled 2.38 mg. The hemoglobin was 13.3 Gm. and the hematocrit 39. Intermediate PPD was negative. There was a 66 per cent excretion of phenolsulfonphthalein at 15 minutes. The urinalysis was normal except for a specific gravity of 1.002. This rose to 1.013 after the administration of Pitressin. The Carter-Robbins and nicotine-stimulation tests were negative.

An X-ray film of the chest was normal. A film of the skull revealed a 1½ by 1 cm. "punched-out" lesion in the skull underlying the soft-tissue swelling. There was evidence of chronic mastoiditis on the left side. The bone survey was otherwise normal.

On May 25 a granulomatous mass involving both tables of the skull was surgically removed from the left supraorbital ridge. The pathologic appearance of the specimen was that of eosinophilic granuloma. Following surgery a total of 2,000 roentgens was delivered to the left frontal area and sella with a Co^{60} teletherapy unit.

The child was given Methotrexate (2.5 mg. daily). The symptoms of diabetes insipidus were satisfactorily controlled with postpituitary snuff insufflation 4 times a day. The discharge diagnosis was Hand-Schüller-Christian disease as evidenced by eosinophilic granuloma of the skull, granulomatous mastoiditis, and diabetes insipidus.

SUMMARY

The primary function of the neurohypophyseal system appears to be the maintenance of normal osmolarity of the extracellular fluid. A complex regulative interaction between plasma osmolarity, excretion and release of antidiuretic hormone and facultative water reabsorption by the distal renal tubule assures this vital end.

The neurophysiologic and neuropathologic basis of diabetes insipidus, which in its "true" form results from a partial or absolute deficiency of the antidiuretic hormone, has been reviewed. Current interpretive and diagnostic tests as well as therapeutic measures have been described. Two representative cases of diabetes insipidus observed in children have been presented in order to emphasize the clinical course and management of this striking disorder.

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Pneumonia in Erythema Multiforme Exudativum

Report of a Case and a Review of the Literature

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Erythema multiforme exudativum has stimulated the interest of physicians since von Hebra[1] first separated it from a group of heterogeneous erythemas in 1866. It remains a disease of unproven etiology with protean manifestations,[2] and its association with pneumonia has been repeatedly commented upon. Opportunity to see a patient recently with erythema multiforme exudativum and pneumonia has prompted us to review the literature in an effort to elucidate the clinical features of the syndrome and to elaborate on the etiologic possibilities with the hope that therapy may seem more rational.

Report of Case

T. J., a 45-year-old Negro, was admitted to Mt. Alto VA Hospital for the fourth time on September 14, 1959, with a chief complaint of a pleuritic type of anterior chest pain, fever, and cough productive of thin, white sputum for 2 days. He had a history of recurrent erythema multiforme exudativum for 10 years, and for the last 6 months had been maintained on 20 mg. of prednisone a day. When last seen in August, 1959 his skin was clear. His supply of prednisone was exhausted 2 weeks prior to his admission, and 1 week later he noted an exacerbation of typical vesiculobullous lesions on his arms, trunk and lips. Two days prior to admission he developed respiratory symptoms. He gave a history of recurrence of erythema multiforme exudativum associated with a penicillin injection several years before, but no other relationship to drugs, preceding infections or immunizations could be elicited.

The temperature was 101°F, the blood pressure 160/90, and the pulse rate 82. The patient was tachypneic and had a frequent, nonproductive cough. He had multiple vesiculobullous lesions on his extremities and trunk. Macular iris lesions were also present. There were superficial ulcerations of the lips and buccal mucosa. Bilateral inspiratory crackling rales were heard at the bases posteriorly.

The white blood cell count was 18,300 with 85 per cent polymorphonuclear leukocytes. The total eosinophil count was 56 per cu. mm. of blood. Cold agglutinins were positive (1:4) and negative a week later. Sputum cultures were positive for a nonpathogenic Neisseria. An X-ray film of the chest (fig. 1) showed a granular, confluent opacity extending out from both hilar regions.

Therapy consisted of the use of tetracycline to control suspected secondary infection of the skin and prednisone, 40 mg. a day. Within 24 hours the patient was afebrile and asymptomatic. The prednisone was reduced gradually to a maintenance dose of 10 mg. a day. The skin lesions improved and appeared dried and crusted. Within 10 days an X-ray film showed complete clearing of the pneumonic infiltration.

Discussion

The syndrome of erythema multiforme exudativum has deen plagued with many eponyms, such as Stevens-Johnson syndrome,[3] Bechet's disease, and Klauder's disease,[4] to name only a few, and as a consequence has defied classification.[5, 6] However, the typical syndrome of erythematous, papular and/or vesiculobullous lesions of the skin with mucous membrane involvement occurring usually in the young adult with constitutional symptoms and a tendency to recur is well known to most physicians. Thomas' division[7] of erythema multiforme exudativum into 2 main classes, major and minor, depending on severity, has some merit. Erythema multiforme exudativum major he likens to the syndrome described by Stevens and Johnson in which the patients have marked constitutional symptoms with conjunctivitis and other mucous membrane involvement. Erythema multiforme exudativum minor is similar to that which von Hebra described and is mainly limited to the skin with few, if any, constitutional symptoms. We would agree with Lynch[8] that erythema multiforme exudativum is a well-defined concept and a disease *sui generis* with not only skin and mucous membrane manifestations but occasionally evidence of gastrointestinal, cardiac, central nervous system and articular involvement.

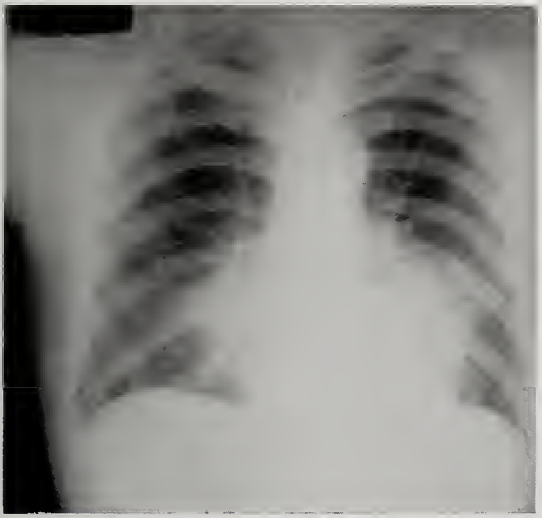

FIG. 1. PA chest showing bilateral perihilar confluent densities.

Of particular interest to us is the frequency of pulmonary manifestations as a part of the syndrome. In Ashby and Lazar's analysis[9] of 77 previously reported cases plus 4 of their own, lung lesions were present in 30 per cent, usually in the form of bronchopneumonia or bronchitis. Soll[10] reported 20 cases in 19 of which respiratory symptoms, with cough, sore throat, etc., were the initial complaints. He thought that bronchitis was present in the majority of patients with erythema multiforme exudativum and demonstrated bronchopneumonia in 2 cases. The pneumonia is indistinguishable clinically, radiologically, and in some cases serologically from primary atypical pneumonia.

In the Canadian literature there have been several reports of a syndrome mimicking erythema multiforme exudativum in which respiratory involvement occurred as an integral part of the syndrome.[11, 12] They prefer to call this the "mucosal respiratory syndrome," and in a report of 17 cases by Stanyon and Warner[12] pneumonia was present in 14. All the patients had distressing cough with expectoration of large amounts of glary mucopurulent sputum. There seems to be no relationship between the occurrence of pneumonia and the severity of the skin and mucous membrane lesions, and clinical evidence of pneumonia may actually antedate the appearance of the skin eruption. There may or may not be leukocytosis, and eosinophilia is unusual. Hyperglobulinemia has been reported, but lymphadenopathy has not been common. The X-ray appearance usually is a patchy bronchopneumonia with densities extending out from prominent hilar shadows, frequently bilateral.

Speculation as to the etiology of erythema multiforme exudativum has run the gamut from bacterial, to viral, to drug toxicity, to nonspecific hypersensitivity. There have been many reports of the occurrence of erythema multiforme exudativum following the administration of sulfonamides, penicillin, barbiturates and antipyrene compounds, to mention a few. However, there are as many reports of favorable results, without ill effects, thought to be due to the administration of sulfonamides and penicillin during the acute illness. Repeated studies have failed to unveil any bacterial factor. Finland[13] reported elevated titers of psittacosis antibodies in 2 patients, 1 of whom had had recent exposure to dead birds. There have been several reports of elevated cold agglutinin titers in patients with pneumonia and erythema multiforme exudativum,[13, 14, 15] and many studies to isolate a specific virus have been carried out.[10, 12, 15]

The character of the vesicular lesions and the possible epidemiologic aspects[16, 17] prompted Anderson et al[18] to inoculate vesicular fluid of a patient into the scarified rabbit cornea. This produced a keratoconjunctivitis, and these authors were able to demonstrate cytoplasmic inclusion bodies in the cells of the rabbit's cornea. Finland[19] isolated a strain of herpes virus from the lung of a fatal case of erythema multiforme exudativum with pneumonia, and Womack and Randall[20] demonstrated increasing serum antibody titer against 2 strains of herpes simplex virus in a patient with erythema multiforme exudativum. Except for a few isolated cases the demonstration of a specific virus has not been forthcoming.

The histologic studies of the skin lesions have shown an acute inflammatory process with round-cell infiltration, edema, and congestion. According to McCarthy this probably represents a generalized infectious process with a circulating toxin rather than a primary disease of the epithelium.[10]

Edgar and Syverton[21] were unable to demonstrate an etiologic agent by inoculation experiments in animals, but the subsequent injection of a patient's serum resulted in death of laboratory animals with characteristic findings of anaphylactoid shock. Bøe et al[22] showed areas of necrotizing vasculitis with associated fibrinoid necrosis in the bowel wall of 2 patients who had erythema multiforme exudativum and gastrointestinal involvement.

There is almost complete agreement on the pathologic findings in the lungs of those patients who have died with erythema multiforme exudativum and pneumonia. Certainly pneumonia as a manifestation of erythema multiforme exudativum represents the greatest single threat to life. Finland[13] reported 3 fatalities among 4 patients, and Short[23] describes 2 deaths out of 3 with pneumonia. The few patients that have had bronchoscopy showed aphthous erosions of the tracheobronchial mucosa. The lungs at autopsy are described as heavy and meaty and either studded with large, yellowish necrotic zones or as almost completely consolidated. Fibrinous exudates covering the lungs have been described, and the hilar nodes may be fleshy, large and hemorrhagic. The bronchi are described as containing thick, creamy, mucoid material. Sections through the areas of consolidation reveal fibrinous material in the alveolar exudate containing large mononuclear cells but very few pus cells. It seems reasonable to postulate that the tracheobronchial tree is involved with an eruption similar to that in the other mucous membranes and that it is not necessary to ascribe the pulmonary picture to some unrelated pneumonic process.

The sudden and widespread mucosal involvement in erythema multiforme exudativum suggests an allergic or hypersensitivity syndrome. The histopathologic changes described are compatible with an allergic hypothesis, and it would seem logical to us, as it does to Librach,[24] to conclude that associated with an infection, possibly viral, or the administration of certain drugs or following some immunization procedures there is an abnormal antigen-antibody reaction with a time-interval between the stimulation of antibodies and the onset of symptoms averaging 7 to 10 days, simulating serum sickness. There are those cases arising without preceding infection, drug administration or immunization which defy explanation.

The fact that erythema multiforme exudativum is most often a self-limited disease has rendered evaluation of any specific drug therapy difficult. Despite documented cases of the syndrome due to sensitivity to sulfonamides and penicillin, both these drugs have been reported to give fair results during the acute illness. Also, aureomycin showed promise in isolated cases. In general, the use of antibiotics is thought to have no specific effect on the primary disease but is indicated for control of secondary bacterial infection. Because the brunt of distress is borne by those tissues having large amounts of histamine, namely, the skin, eyes, mouth, and genitalia, the use of antihistamines seemed logical, but actually it has been of value only in rare instances.[25]

On the assumption that erythema multiforme exudativum is one of the hypersensitivity syndromes it was a foregone conclusion that corticosteroids would be tried. There have been many reports of its use, and most of these are favorable.[26-33]

In those cases in which corticosteroids have been used early there has been striking clinical improvement with diminution of toxicity and rapid decline of all clinical signs and shortening of the illness. In the case described the patient had had multiple recurrences of the skin and mucous membrane lesions but never before associated with pneumonia. He had been on prolonged steroid therapy with control of his skin lesions but failed to have his medication renewed, and after several weeks without therapy suffered an exacerbation with typical skin and mouth lesions and clinical and radiographic evidence of a bilateral pneumonia. His initial cold agglutinin titer was 1:4 but was negative when repeated. He was placed on tetracycline for control of suspected bacterial infection of some of his skin lesions plus 40 mg. of prednisone daily. He improved rapidly and within 24 hours was asymptomatic. The skin lesions healed by drying and crusting and his lungs had completely cleared radiographically within 10 days.

It is our opinion that pneumonia is a definite part of the erythema multiforme exudativum syndrome and is another manifestation of a hypersensitivity response to certain known and certain unknown antigens. The incidence of pneumonia may be as high as 30 per cent and poses a definite life-threatening situation. Corticosteroids are the drugs of choice and should be used early in the course of the illness.

SUMMARY

Pneumonia as part of the erythema multiforme exudativum syndrome is not uncommon. There is nothing specific clinically or radiographically about the pneumonia.

Because of the sudden and widespread mucosal involvement and failure to document a specific etiologic factor it is thought that erythema multiforme exudativum is one of the hypersensitivity syndromes.

In treatment corticosteroids are the drugs of choice.

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The Mongoloid-Leukemic Syndrome*

Report of a Case and a Review of the Literature

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The syndrome of mongolism with its characteristic physical and mental stigmata and acute leukemia with its universally fatal outcome are fortunately relatively uncommon in the general population. The fact that both catastrophic conditions occur simultaneously with considerable frequency is curious and perhaps significant. Investigation of the mongoloid-leukemic syndrome may reveal basic etiologic relationships which could lead to better understanding of both conditions.

Report of Case

A white female was the firstborn of normal 22-year-old parents. There was no family history of blood disease or malignancy. Pregnancy was normal and delivery uncomplicated. Birth weight was 6½ lbs. She was considered normal until the age of 11½ months, when the diagnosis of mongolism was suggested to the parents. Anemia was also noted during this examination, and the child was placed on oral iron therapy. She was seen to bruise easily, and multiple petechiae were observed after excessive crying or straining. When she was 18 months old, she was seen at another pediatric clinic where the classical features of mongolism, splenomegaly, and a few petechiae were observed.

A few days later the size of the spleen increased and numerous petechiae were noted. Because leukemia was suspected the patient was referred to this hospital. She was admitted on December 22, 1959, when she was 18 months of age.

Physical examination revealed the classical physical stigmata of mongolism (figure 1). The palate was high-arched and the tongue protruded. Epicanthal folds were

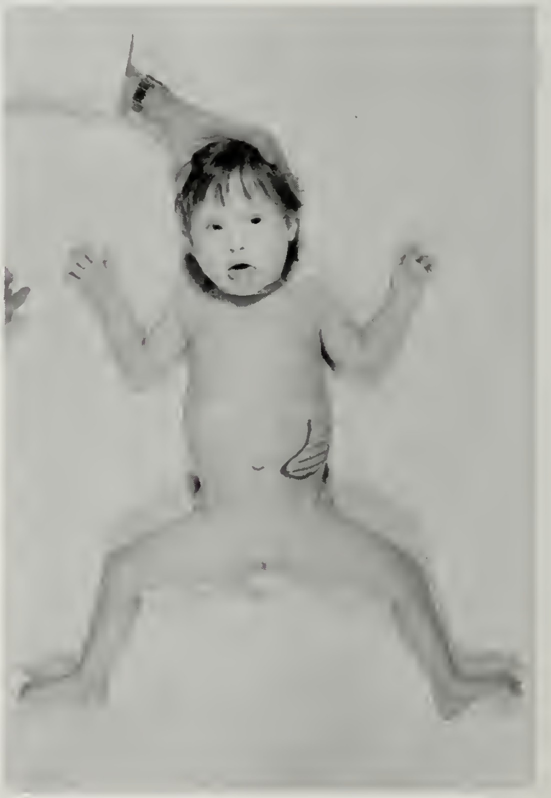

Fig. 1. The facial characteristics of mongolism are apparent; enlarged spleen has been outlined.

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noted, and there was a slight internal strabismus and rotary nystagmus. The hair was fine and dry, and there was an excess of skin on the back of the neck. The nipples were hypoplastic. A single transverse palmar crease was seen in the right palm. The fifth digits were normal. The heart was not enlarged. A grade II pansystolic murmur was heard, loudest at the left sternal border in the third intercostal space. The abdomen was soft and the liver was enlarged 4 cm. below the right costal margin. The spleen was firm and enlarged 8 cm. below the left costal margin. The skin was dry and had poor turgor. Fine petechiae were seen over the anterior trunk and extremities. There was no significant lymphadenopathy. The child was hypotonic. Deep tendon reflexes were decreased.

The peripheral blood values are listed in table 1. X-ray studies showed an essentially normal chest except for a slightly increased pulmonary vasculature pattern. Bone age was 12 months. Aspiration and a Silverman biopsy of bone marrow[1] done on December 23, 1959 revealed a hyperplastic bone marrow with increased percentage of blast forms. Therapy with 6-mercaptopurine, 25 mg. per day, was begun.

TABLE 1

Representative Hemograms of Patient

Admission No.	Date	White Blood Count	Neutrophils	Lymphocytes	Bands	Blasts	Hemoglobin	Hematocrit	Platelets	Comment
	12/12/59	6,750	21	75	1	—	10.	—	Low	Many immature lymphs
1	12/22/59	5,622	27	49	12	9	8.0	29	95,000	Admitted
	12/26/59	9,700	48	48	6	—	8.5	26	15,000	Upper respiratory infection
	1/6/60	9,400	41	27	10	8	5.9	22	10,000	Before transfusion
	1/8/60	7,350	29	28	3	30	9.6	31	6,500	After transfusion
	1/18/60	5,150	27	19	2	34	8.2	27	15,000	—
	1/20/60	4,100	23	26	2	32	8.9	31	16,000	Before irradiation
	1/26/60	2,100	18	8	1	22	8.5	30	12,000	4 days after irradiation
2	2/1/60	2,900	12	84	—	4	9.2	24	—	Admitted
	2/8/60	6,800	17	68	4	3	8.3	29	—	Before transfusion
3	2/21/60	4,350	43	41	3	3	11.	33	5,000	Admitted
4	3/18/60	16,140	22	32	11	1	8.9	29	3,000	Admitted
	3/23/60	3,900	33	50	7	4	6.6	26	4,000	4 days after Methotrexate and onset of diarrhea
	3/28/60	1,040	11	67	13	3	9.8	23	1,000	
	4/4/60	2,100	—	—	—	—	9.9	33	2,000	Before prednisone and ACTH
	4/8/60	3,430	30	44	3	13	10.	31	10,000	3 days after prednisone and 2 days after ACTH
	4/11/60	3,460	30	40	5	17	6.4	20	9,000	Before transfusion

Two weeks after admission the hemoglobin level had fallen to 6.0 Gm. and the hematocrit was 22. The patient's erythrocytes were tagged with Cr^{51} and reinjected with a transfusion of 200 c.c. of packed red blood cells. The RBC $Cr^{51}T_{1/2}$ was 10.5 days (normal: 25–35 days), indicating a severe hemolytic process. Significant splenic sequestration was detected by surface scintillation scanning.[2] Splenic irradiation was begun on January 22, 1960 with a van de Graaf unit in an attempt to decrease hemolysis, 300 r being administered during 6 days. The spleen became noticeably smaller, and on January 29, 1960 the patient was discharged.

Three days after discharge the patient was readmitted because of possible bronchopneumonia. She was transfused with 90 c.c. of packed red blood cells, and on February 8, 1960 was discharged on antibiotic therapy.

The patient was readmitted on February 21, 1960 for reëvaluation. Physical examination was unchanged. Peripheral blood studies (table 1) revealed a decrease in platelets and an increase in hemoglobin and hematocrit levels. The bone marrow showed a decreased percentage of blast forms suggestive of a partial remission. The child was discharged on February 25, 1960, continuing 6-mercaptopurine therapy.

On March 18, 1960 she was readmitted for the last time. The spleen was palpated 5 cm. below the left costal margin. There were no bruises or petechiae. The bone marrow showed leukemia in complete relapse. Because of apparent unresponsiveness to 6-mercaptopurine, therapy with Methotrexate, 2.5 mg. per day, was started on March 19, 1960. The patient developed a severe diarrhea, and *E. coli* type 0127 was cultured from the stool. Fluid therapy and several antibiotics were used during the next few weeks.

Methotrexate toxicity manifested by severe stomatitis was noted on March 30, 1960, and the drug was discontinued. Because of worsening clinical condition, prednisone, 40 mg. per day, was started on April 5, 1960, and daily doses of ACTH, 10 units, were begun also. Clinical improvement was observed for a short time. However, a few days later the patient again became somewhat dehydrated. By April 11 the hemoglobin had fallen to 6.4 Gm., and the platelet count was 9,000. She was transfused with 125 c.c. of fresh whole blood. Many petechiae appeared over the thorax and abdomen.

The clinical condition deteriorated steadily. On April 15, 1960 the patient lapsed into coma and died.

Autopsy findings.* The gross and microscopic findings were characteristic of leukemia. Massive leukemic infiltration of the liver, spleen, kidneys, and bone marrow was observed. There were gastrointestinal ulceration and hemorrhage. Extensive bronchopneumonia was also observed and believed to be the immediate cause of death.

DISCUSSION

The first case of mongolism associated with acquired leukemia was that of an 11-month-old boy reported by Brewster and Cannon[3] in 1930. Several instances of mongolism were described in papers dealing with congenital leukemia.[4-6] However, the 2 conditions were not definitely causally related in these reports. In 1957 Krivit and Good[7, 8] noted a number of patients who had mongolism and leukemia. They attempted to determine whether the coexistence was accidental or of biologic significance. They deduced that, if this combination was found to occur more frequently than could be explained by chance alone, a common denominator might exist.

Krivit and Good's study covered the period from 1952 to 1955 and was limited to children under 4 years of age. This age range was chosen because of the availability of statistics concerning the incidence of both leukemia and mongolism, and because mongoloids tend to die at an early age, making the study of older children difficult to evaluate.

They documented 34 cases of mongoloid children with acute or subacute leukemia. As shown in table 2, the highest estimated incidence of mongolism in children, zero to 4 years of age, in an average American population, is 59,400 per year or 1 to 294 births.[9] The more conservative estimate is reported to be about 1 to 700.[10] The estimated incidence of leukemia in this group is 1 to 19,200 for each year (average of 910 per year). Therefore, using the most liberal estimates, a maximum of 12.3 cases of the mongoloid-leukemic syndrome would be expected during the 4-year period studied, providing its occurrence was merely accidental. Hence, the observed incidence was approximately 3 times the predicted number. These data indicate that a statistically significant increased occurrence of leukemia in mongoloids occurs.

Since this seems statistically significant, are there fundamental etiologic factors? In an attempt to answer this question, studies were done to determine whether the stigmata of mongolism were seen with increased frequency

TABLE 2*

Estimation of Incidence of Mongolism and Leukemia Based on an Average General Population of 17,474,000 in the 0 to 4 Years' Age Group

	Mongolism	Leukemia
Average per year	59,400	910
Incidence per year	1:294 births (assuming all live 4 years)	1:19,200

* From Krivit and Good.[8]

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* We are indebted to Lt. Comdr. Thomas Hartney, M.C., U.S.N., of the Pathology Department, Naval Medical School, National Naval Medical Center, Bethesda, Maryland for this information.

in children with acute leukemia. In 1957 Sutow[11] studied the incidence of brachycephaly, abnormal dermatoglyphics, hypoplasia of the middle phalanx of the fifth finger, and congenital cardiac defects in 59 children with acute leukemia. He failed to demonstrate that an increased frequency of these anomalies occurred in this group.

Other investigators have concentrated on discovering etiologic factors which could lead to the simultaneous occurrence of these conditions in the newborn or in early life. The pathogenesis of the anomalies, collectively known as mongolism, is unknown. One theory, advanced by Ingalls,[12] states that the crucial time for the development of mongolism lies between the sixth and ninth week of fetal life and has become known as the "eighth-week disease." During this important period of organogenesis a stress (physical, chemical, or infectious) exerted against the developing organism produces the congenital defects of mongolism.[13] Mongolism, therefore, affects almost every anatomic system which is differentiating rapidly at that time, for example, the brain, heart, and skeleton (table 3). The development of leukemia might conceivably have a similar origin, since embryologists[4, 6] have observed that granulocytes appear in the seventh week of gestation but lymphocytes do not develop until the eighth or ninth week. Most cases of congenital leukemia are thought to by myelogenous. Thus, the high incidence of leukemia in mongoloids suggests the possibility that the developing hematopoietic system may be injured simultaneously with the brain, skeleton and heart. The leukemia, therefore, might result from the same insult that produces the more conventional abnormalities of mongolism. It is also possible that mongolism merely predisposes to the occurrence of leukemia rather than resulting from the same injurious prenatal cause[14] or that the prenatal stress increases susceptibility to more immediate etiologic agents (e.g., virus, X-ray, or other carcinogens).[15]

TABLE 3*

Time of Development of Anatomic Defects in Fetal Life

Anomaly	Period of Gestation (Weeks)
Mongolism	6–9
Interatrial septal defect	5–7
Agenesis of ear	10–14
Klippel-Feil syndrome	9
Dextrocardia	5
Absence of radii (Fanconi's syndrome)	6–8
Patent interventricular septum	5–7

* Modified from Bernhard.[4]

It would seem that, if both components of the syndrome were caused at the same time, the age of onset of the leukemic aspect would be shortly after birth. However, in most cases the leukemia occurred from 2 to 10 years postnatally.[14] This fact does not completely negate the possibility that the essential damage occurred during the neonatal development.[16] Such damaged tissue may retain a susceptibility to leukemogenic influences to which they are later exposed.

Some authorities[17, 18] have suggested that leukemia may be transmitted by a "filterable agent" or virus. The same leukemogenic agent could conceivably also damage a fetus and be responsible for mongolism. No evidence to support or negate this theory is available.

Recently a startling and important discovery in mongolism has been reported with the use of newer technics for enumeration and morphologic examinations of human chromosomes. Ford et al[19, 20] and others[21, 22, 23] developed a technic whereby bone-marrow cells were incubated with colchicine in order to arrest mitosis at metaphase. The preparations were then "squashed" on a glass slide to disperse the chromosomes, stained, and examined microscopically. By means of this method the diploid chromosomal number has been established as 46 in the normal individual.[23, 24]

Lejeune et al[22, 25] were the first to report abnormalities of chromosome numbers in mongoloids. In 1959 they published the finding that

3 patients with mongolism had 47 chromosomes. Jacobs et al[21] and others [26, 27] have confirmed these results (table 4). Jacobs reported 3 male and 3 female mongoloid children, all of whom had 47 chromosomes. She describes the forty-seventh chromosome as "an acrocentric chromosome in the smallest size range . . ." and states that the remaining 46 "do not appear different from those in the normal diploid set." From these data it is evident that mongolism is associated with the presence of an extra chromosome in a majority of cases.

TABLE 4*

Chromosome Counts in Four Mongols

Case No.	Chromosome No. and the No. of Cells Counted					
	44	45	46	47	48	Polyploids
H114	1	—	2	41	7	3
H120	—	1	6	26	2	—
H122	—	1	2	36	1	4
H125	—	1	1	34	3	3

* From Jacobs et al.[21]

The association of a predisposition to leukemia in individuals with an abnormal karyotype (chromosomal pattern, i.e., number and form) is of potential importance. Discovery of the presence of chromosomal abnormalities both of number and form has been reported in several cases[19, 28] of acute human leukemia, although their frequency and significance in relation to carcinogenesis remain questionable.

A case of acute leukemia with 2 extra chromosomes (total 48), as well as an abnormal chromosomal morphology, was reported by Baikie et al.[28] The modal number changed to 47 7 months after diagnosis. In another group of 4 patients with acute leukemia 1 patient had an abnormality of number, 2 had only morphologic changes. In the fourth, a mongoloid, the leukemic and the normal cells showed an abnormality of chromosomal number characteristic of mongolism.

These investigators suggest 3 possibilities for the relation of chromosomal changes to the pathogenesis of acute leukemia: (1) the chromosome changes may arise as epiphenomena in a grossly disordered bone marrow, (2) the visible chromosome changes may include the fundamental change which has conferred neoplastic qualities on the marrow cells, and (3) it is possible that the chromosome changes are the consequences, perhaps the remote consequences, of a more subtle alteration in the genetic constitution of the leukemic cell. According to this group the last interpretation seems the most likely. They reason that if the chromosomal changes occur merely as a result of a gross disorder of the bone marrow, why have similar changes not been found in chronic leukemias in which the marrow is at least as abnormal as in many acute leukemias? It could be, too, that translocations, which could be obscured by the more gross changes, represent the basic structural alteration which induces leukemia. Baikie[28] concedes that more information will be needed before definite conclusions can be drawn.

It is certainly probable that these etiologies may all be interrelated, that is to say, that there may be a "filterable agent" or virus which enters a germ cell, distorting its chromosomal pattern. This in turn predisposes the developing organism to an endogenous or exogenous stress (or stresses) during its period of organogenesis, the entire sequence of events ultimately producing the mongoloid-leukemic syndrome.

SUMMARY

A new case of the mongoloid-leukemic syndrome has been presented.

It has been shown that the incidence of this unusual combination is greater than can be predicted by chance alone.

Various proposed etiologies are enumerated. However, the finding of chromosomal abnormalities in the component diseases of this syndrome has influenced many to suspect a common etiology for these conditions, perhaps providing a new clue in the search for the causes of acute leukemia.

(Continued on page 190)

Partial Hepatectomy for Benign Hepatoma

Report of a Case

READ N. CALVERT, M.D., F.A.C.S.

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Hepatoma is a term applied to a primary tumor of the liver cells and usually is malignant but may be benign. This form of tumor is very rare among European and American Caucasians but quite common among the peoples of certain parts of China and the Orient as well as South Africa. Primary carcinoma of the liver is as uncommon as secondary (metastatic) carcinoma is common.

Benign hepatoma, also called hepatic adenoma, is much more rare than malignant hepatoma. Grossly the benign type is irregular, fairly firm, lighter in color than the normal liver, and sharply defined. Microscopically it is composed of irregular columns of well-differentiated liver cells with abundant eosinophilic granular cytoplasm. The normal architecture of the nodule is lost and there are no definite, normal portal triads or central veins. There is no evidence of invasion of vascular spaces and no mitoses.

Hepatoma is a tumor of parenchymatous liver cells and does not have any connection with the biliary ductal system. Cholangioma is the designation for a malignant tumor of intrahepatic biliary duct cells. Some have described a mixed type including both elements.

Some interesting research work has been done in recent years tending to throw some light on the geographic distribution of primary liver tumors. A number of investigators have thought that there is experimental evidence showing that dietary deficiencies are factors in the development of these liver tumors. It appears that casein and riboflavin are the protective factors. These food elements are lacking in many Oriental diets. Chronic parasitism and especially liver flukes have been considered a prominent factor in the etiology of primary liver tumors in the Far East.

Report of Case

The patient, a housewife aged 28 years, referred by Dr. Wallace Mook, was admitted to the Washington Sanitarium and Hospital for surgery because of pain in the right upper and lower quadrants of the abdomen with a lot of "gas." A right salpingo-oöphorectomy for cystic ovary, an appendectomy, and lysis of a firm adhesive band were carried out. During the abdominal exploration gallbladder disease was not found, but instead, a nodular, mottled, light-colored mass was felt and seen in the extreme left border of the left hepatic lobe, involving the superior and inferior surfaces. It was thought to be malignant, but no primary lesion was found. Decision was made to get a full pathologic report on paraffin sections of the ovary and discuss with the patient the removal of part of the liver before doing further surgery.

The patient, who was rather nervous, stated that she had had pain in the right upper abdomen for 4 weeks which at times was sharp and stabbing. She also complained of spells about once a week with terrible bloating from "gas" across the upper abdomen. The pain in the lower right side had been present for about 10 years and was very severe at times and worse if she sat down suddenly. For several years she had been unable to sleep on her right side because of a feeling of pressure from the left side which felt as if her breath were being squeezed out of her chest. For the past year and a half she had had a "feeling of tenderness" over the lower left hemithorax anteriorly below the breast, and she could not wear a "bra" because of the "constriction." She also complained of severe "heartburn" after eating fatty foods, especially chocolate and rich gravies.

There was no nausea, vomiting, constipation, diarrhea, ascites, or evidence of cirrhosis. The rest of the inventory of symptoms was not particularly pertinent. The physical findings were essentially negative except for tenderness over McBurney's point and slight tenderness over both ovaries. Routine laboratory tests were essentially negative.

The pathologist's report on the right ovary was negative for malignancy. Permission was obtained for a partial hepatectomy, and this surgery was performed on the left lobe of the liver. A few details of the technic may be of interest.

The abdomen was opened through a high left paramidline incision but did not give adequate exposure, and therefore a left transverse incision was made at right angles to the original incision. The left triangular ligament was clamped and incised, 2 bites being taken before the left side of the liver could be properly mobilized and brought down near the edge of the wound. The light-colored nodular hepatoma at its left lateral border measured about 6 or 7 cm. in the fresh state. Six overlapping mattress sutures of double chromic no. 1 catgut were used to block off the tumor mass about 3 cm. from the edge of the tumor. To further control the bleeding, a long, curved, flexible, rubber-covered intestinal clamp was placed across the distal third of the left lobe of the liver, and the tumor was removed with a horizontal wedge-shaped incision about midway between the mattress sutures and the tumor mass. As the special clamp was released small bleeders would appear and about 6 or 8 were clamped with small curved Kelly clamps and tied off individually. A large piece of Gelfoam was placed over the raw area of the liver between the edges of the wedge and held in place with chromic catgut, the long ends of the mattress sutures, which had been tied alternately on the superior and inferior surface of the liver, being utilized. The wound was drained and closed in layers with chromic catgut, wirestay sutures and clips.

The pathologist's report was hepatic adenoma.

The patient made an essentially uneventful recovery from her surgery. There have been no complications or sequelae, and follow-up examinations show the patient to be in good health.

SUMMARY

A case of primary benign hepatoma has been presented since it is an uncommon entity. A few details of the surgical technic of partial hepatectomy have been given.

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PRESIDENT'S PAGE

WE GIRD FOR BATTLE

In accepting the challenge that faces medicine in the 60's, and in assessing our strength to meet it affirmatively and creatively, our first task as a Society is to develop into active function all of the units by which we achieve organized effort. No duty rests more heavily on an incoming President than the establishment of our complex committee structure. Appointments are approved by the Executive Board, but the major responsibility belongs to the President. Counting the special committees for the recent AMA session and for our own ASSEMBLY this year together with the regular committee roster produces a total of more than 500 assignments.

Not only do these numbers carry a heavy work load but, perhaps more importantly, each is a center of educative effort, first for himself and then for those who come in contact with him, not only colleagues but patients and the laity generally. We must recognize that an improved image of medicine must rest upon such effort by individual physicians. While the work of certain committees seems outstanding and is more in demand, the total of individual performance has maximum value to the Society and is the best answer to our major dilemma: how to provide collective action while maintaining individual freedom. Proper committee function is the choice means of securing a consensus.

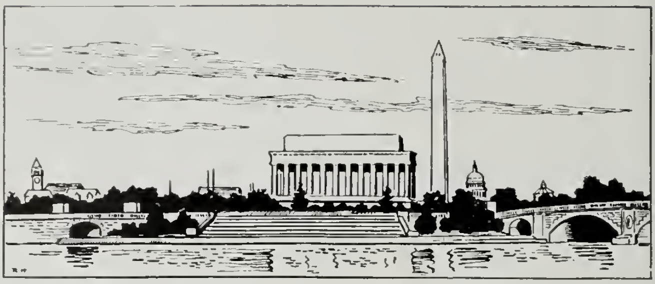
Since we are the natural cynosure for eyes seeking the bad spots of medicine, your Society in the Nation's Capital is deeply concerned with national affairs. We are proud of our role in helping the AMA under the House of Delegates' directive to move toward affirmative leadership in prepayment promotion as our best answer to financial problems of providing medical care. We are determined to support strongly the newly created Joint Commission of AMA–AHA and Blue Shield–Blue Cross to promote voluntary, nonprofit, prepayment plans. We are firmly convinced that the associated Blue Shield Plans of America are, already in being, the best and perhaps the only mechanism by which the medical profession joined with other prominent community leaders can provide the public generally with an acceptable system of prepayment for physicians' services.

We recognize that, at this turn in history, for most individuals to pay for such services from personal resources or even with indemnity insurance dollars is a dream from the past rather than a possibility for the future. On the other hand, we know that nation-wide panel practices with increasing regimentation and curtailed patient-physician relations would be severely damaging to the present high level of professional achievement in medicine.

Thus it seems to us that the reasonable middle-of-the-road course which offers the best assurance of success is an expanded Blue Shield program supported by strong physician commitment to provide a much broader scope of benefits under guarantees of adequacy to meet reasonable bills. We intend to support progress on this middle course in our profession, locally and nationally, and among the public. We urge that legislation which would allocate to Government any increasing responsibility for any segment of our people be designed with special care to protect the best in voluntary prepayment, which must remain the dependable bulwark for the vast majority who still must depend upon themselves.

Our high purpose is to weld our Society, with officers and committees, into organized support of these broad principles. We call upon all our people, members and wives, to join worthily in this battle.

Donald Stubbs



EDITORIALS

FIRST WHITE HOUSE CONFERENCE ON AGING

On January 9 of this year some 2,800 delegates, staff, and resource people met as the first White House Conference on Aging to consider what an added 20 years of life, largely unplanned, have meant to 16,000,000 elderly people in terms of unmet needs and unutilized resources. The physician as a citizen should be concerned with all facets of aging. Medicine as a profession must concern itself in particular with health and medical care, rehabilitation, and methods of financing their ever-increasing costs. While the final reports from the Conference have not as yet been published, comments on certain aspects merit consideration before interests begin to wane.

There seemed to be rather general agreement among the delegates that the Conference itself was worthwhile and that it served the objective of bringing together people with facts, experiences, and ideas for mutual discussion and logical recommendations. The Advisory Committee, under the chairmanship of Robert W. Kean, and the Special Staff on Aging deserve special commendation, not only because of the proficient Conference organization but for their efforts to have it truly a states' conference without Federal intervention and as nonpolitical as possible.

The policy statement and recommendations of the Section on Health and Medical Care stressed the need for action in five areas.

Under the first of these, Institutional Care, they pointed up the need for a broad spectrum of facilities planned in an orderly way with clear functional definition. They expressed the need for improved quality of care in many institutions, and that to achieve this licensing laws must be adequate to protect the public and vigorously enforced to maintain even minimal standards. Continued improvement might well be engendered by a voluntary accreditation program. It was felt that extension of insurance coverage to the whole institutional care spectrum and even to care in the home was a necessary prerequisite to adequate facilities and programs.

In the second area, Care in Home, the consensus was that a multiphasic approach would be the only way to establish an adequate Home Care Program, and that the physician should be the coördinator of these services.

Health Maintenance, the third area of consideration, should include, besides periodic health appraisal, an educational program stressing nutrition and the need for continuing physical and mental activity. It should be recalled that the American Medical Association's Committee on Aging felt that a periodic health appraisal was the single, most important service that organized medicine could provide to help the aging individual, and further that the medical profession needed to become more

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia

cognizant of the importance of an adequate examination in the prevention and early detection of disease.

The fourth area, Mental Health, it was agreed, should be approached in a more positive way, utilizing the same preventive measures and restorative services for the older patients that are used for younger ones or other types of illnesses. It was thought that the mentally ill aged should receive service in the community from the same agencies and clinics serving other groups and should not be hospitalized unless there is a definite psychiatric indication.

The final phase of the report, dealing with the Organization of Community Services, stressed the importance of fact-finding, program-planning, implementation and coördination of health services, and continuity of care for the chronically ill and disabled.

All of these comments would seem pertinent to the District of Columbia as well as to most other urban communities throughout the country. The concept of a broad spectrum of institutional facilities, from the general hospital to the chronic disease institution, proprietary nursing homes, and church and fraternal homes for the aged, with facilitated flow, is certainly an ultimate aim. This will not be realized, however, until adequate financial support is provided, allowing, for example, nursing homes to be adequately constructed, staffed and programmed. The current situation in mental hospitals, including St. Elizabeths, points up well the results of using institutional beds for aged with only a need for custodial or possibly personal service care.

A recent editorial in *The New England Journal of Medicine*, "Public and Private Health," points up the sometimes suspicious attitude of organized medicine toward community-organized public health programs. This, fortunately, is not too great a problem in the District of Columbia, although the relationship at times may be more one of tolerance than coördination. If this or any similar urban community is to develop an adequate health service for the aging there must be joint program-planning and coördination of health services. Joint effort in such activities as multiphasic screening, prophylactic immunization, and health education not only would meet a need in the community but strengthen the relationship between public and private health efforts.

This first White House Conference on Aging probably engendered more publicity than the field of aging has ever had before, and included many editorial commentaries. These, unfortunately, were largely concerned with differences over means of financing medical care and, more specifically, over the question of Social Security-based financing.

The following comments may help to clarify the Conference action on this issue and give some perspective. First, the subject was assigned for discussion to only 1 of 20 sections, that dealing primarily with income maintenance. Second, the reported policy statement of this section when read in its entirety indicates considerable insight into the problems, and the recommendations in general would seem sound. For example, they stressed that "measures taken to promote old age security be in harmony with broad economic objectives," and, further, that there should be "opportunity for productive employment for those who are able to work." They noted, however, that there will be a significant number who are severely disabled and that employment opportunities "cannot, therefore, be a substitute for income maintenance program for those who retire." They stressed the "pluralistic approach with the individual saving on his own, the individual and his employer joining in private pension arrangements, as well as the individual and his government joining in social insurance and assistance programs." This concept was carried over into financing health care, and it was stated that "the problem of furnishing an adequate level of high quality health care is so large and so complex that its solution will require the use of a variety of approaches, including individual and family resources, voluntary health insurance, industrial programs, Social Security, Public Assistance, and a variety of other programs."

The section recommended that the present Federal legislation (the Kerr-Mills Bill passed during the last session of Congress and supported by the American Medical Association) providing aid for medically indigents is desirable and should be strengthened, and that voluntary health insurance should be expanded as well as private industry's effort to expand its health care programs. The differences become apparent not in what should be done but primarily as to whether private, voluntary, and Public Assistance programs can accomplish the task of meeting the medical care needs of the aged or whether it is necessary for a Federally-sponsored Social Security program to fill this need. It should be noted that the majority of the delegates of this section believed that "the Social Security mechanism" should be the basic means of financing health care for the aged.

It must be acknowledged that the implementation of even clearly indicated recommendations for programs providing medical care for the aged will cost money. The crux of the situation then is whether the individual, either on his own, or through local or even state efforts, will voluntarily plan and provide funds to develop such services, or whether it is necessary to have compulsory Federal legislation. Dr. Howard A. Rusk, writing in the *New York Times* on February 12, stated:

"The very groups of individuals who are economically most likely to need health insurance benefits in their old age are the least likely to take out voluntary health insurance during their working years.

"As a result, they must depend upon public assistance provided by tax funds for medical care in their later years.

"Consequently, the more prudent people who elect to take out health insurance under a voluntary system end up not only paying for their own health insurance, but paying through taxes for the medical care of the less prudent who did not take out insurance."

The White House Conference did not decide the issue. It pointed up what should be done "to manage the patient" and discussed the several methods by which this could be achieved. It could not decide whether our society is mature enough to assume certain responsibilities for its own care, but it indicated that if this is not so, a solution will be forcibly rendered. The principle, it would seem, extends far beyond the question of whether the Social Security mechanism should be the basic means of financing medical care for the aged. It is a question of philosophy of government and one that will ultimately be decided in the political arena.

JACK KLEH, M.D.
Chairman, District of Columbia Council on Aging

THAT "DEBASING" MEANS TEST

One of the most often heard statements made by opponents of the Eisenhower method of financing the illness of the aged was that a means test is necessary and that such a test is degrading, debasing, embarrassing, etc. We understand that a means test is simply a confidential (not publicized) inquiry as to one's income and assets. We wonder what is so derogatory about that. As a matter of fact, it is a very common procedure for many purposes. One cannot get any form of public or private assistance without it. It is used when you want a loan or when you want to rent a house or an apartment or when you want to cash a check. Those nominated for high governmental offices must tell a Senate committee what holdings they possess, and often these are published in the newspapers.

A means test for public assistance is essential for protecting the taxpayer (you and me).

Should we pay for the subsistence or expense of illness for someone who can afford to pay for it himself?

Now, there may be things that are wrong with some means tests, and these should certainly be corrected. If, in order to get public assistance for any purpose, one has to forfeit a small income or sell his home, the rules are wrong. When one's special needs have been met he must have some means of support. If he comes back destitute he again becomes a ward of the public.

Surely in some places the means test must be liberalized, but that is no reason why there should be no means test. We criticize—and we believe justifiably so—the way in which veterans may get hospitalization in a Veterans Administration institution merely by signing a statement that they are unable to pay for it. Why should not a means test be applied here? The needy should be cared for, but in our free enterprise system those who can pay should pay. In order to make the payment of medical expense easier, we, the physicians, have created the Blue Cross-Blue Shield Plans.

Surely there are still other ways of helping those in trouble besides the Government handout, except in the case of the truly indigent. We see nothing debasing in the application of a means test for whatever purpose.

SIDES OF A SQUARE

In his presentation before The George Washington University Medical Alumni Association Luncheon, Dr. Harry F. Dowling skillfully elucidated the needs and requirements for sound medical education and the relationship of Alumni, Faculty, Administration and Students to one another.* At a time when the medical schools are in need of expanding their facilities, when the quality and quantity of applicants should be increased, and when the relationship of alumni to school and faculty must be cooperative, a new concept is born. Such a concept properly presented suddenly seems to clear the path. This appears to be the case of Dr. Dowling's concept of the "sides of a square."

The power of proper communication should not be overlooked. When the alumnus understands the problems of medical schools, when the alumnus is in communication with the faculty, and, likewise, when the school and faculty are in contact with the alumnus, mutual understanding and agreement ensue. The basic step in the building of a strong medical school takes place "when all four sides are strong."

A faculty dedicated to high ideals and devoted to hard work creates a similar demand upon the university administration. Yes, adequate resources are needed, but so are goals. The alumnus and student should be interested in both as they are the informed representatives of the medical community. In them rests the power for the dissemination of that material which leads to the final attainment of goals.

Dr. Dowling quotes Alfred North Whitehead in pointing out the similarity of universities to the monasteries of the Middle Ages. At their zenith the monasteries were "numerous, rich and powerful and appeared to be perpetual; but they lost touch with the people, and as a result their power and influence waned." This must not happen to medical education.

Each medical school is in direct competition with the others today. Assistance from without is being offered by foundations, the American Medical Association, and the Federal Government. Programs for Government support of medical research and medical education—money for remodeling existing medical schools, building new ones, and scholarships and fellowships for medical students—are foremost considerations of this Administration. None of the individuals concerned in the square, however, should be lulled into a sense of "let George do it." It is the potential strength of the alumnus that is most needed now to bring his school up to the front.

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* See pages 173–6 in this issue of the Medical Annals.

ALFRED E. BRIGULIO, M.D.

HOBBY SHOW

The Hobby Show will be one of the outstanding features of the 29th ANNUAL SCIENTIFIC ASSEMBLY to be held on November 27–29, 1961. The reason is that it furnishes the doctor an unusual opportunity to express himself through his many avocations.

Aside from his professional and scientific attainments, the doctor is a well-rounded human being. Much that appeals to his patients about him stems from these other aspects of his total personality. He is usually a person of sensitivity and understanding with diverse enthusiasms. At play he finds momentary relief from the ordinary tensions of his daily life. His hobbies demonstrate with clarity why he means so much to so many.

Among other things, he is often a sportsman, a lover of the outdoors, a fisherman, a golfer, or a gardener. He is artistically creative, frequently a painter, a sculptor, a writer, or a photographer. He may be musically talented, playing various instruments, singing or composing. He is a patron of symphony orchestras and choral groups. In odd moments he may be a doodler, a whittler, a small-train engineer. He's a collector of coins, stamps, antiques, art works. Yes, he's a gem cutter, a boatman, a mountain-climber, a hunter, a breeder of fine horses, a gentleman farmer. He's a gourmet, a wine tester, a man who travels much, or a *bon vivant* to the hilt.

And so, at the coming ASSEMBLY, we invite the doctor to "show off." A sizable area has been set aside for his many hobbies. Entry blanks will soon reach Active members in the mail. We invite you to use your ingenuity and consult with the Hobby Committee about your display.

Doctor, come blow your horn!

HARRY S. DOUGLAS, M.D.
Chairman, Hobby Committee,
29th ANNUAL SCIENTIFIC ASSEMBLY

WOMAN'S AUXILIARY NOTES

The Woman's Auxiliary to the Medical Society of the District of Columbia held its regular meeting on Wednesday, February 8, in the library of the Medical Society Building. Final plans were made for the "Pink Lady Luncheon" and Fashion Show, the latter by Julius Garfinckel & Co., to be held at the Shoreham Hotel on March 8. The Nurses' Scholarship Fund and the American Medical Educational Fund will share the proceeds from this benefit luncheon.

Especially honored at this meeting were the following Charter Members of the Auxiliary: Mmes. Herman Hertzberg, C. Augustus Simpson, Joseph B. Bogan, Tomas Cajigas, Oliver C. Cox, William T. Davis, Horatio Dorman, Raymond T. Holden, Sr., Robert R. Hottel, Oscar B. Hunter, Sr., and Leon A. Martel.

A nominating committee was elected, consisting of 2 members of the elected officers of the Executive Board, Mrs. O. Hugh Fulcher and Mrs. Harold Heiges, and 5 from the active membership: Mmes. Roger Williams, Charles Tegge, Lawrence A. Rapee, Francis J. O'Bryan, and Harold R. Downey. The nominating committee will present a slate of new officers for the approval of the membership in April.

The House Committee, headed by Mrs. John M. Evans, served a lovely Valentine buffet, featuring seafood Newburg and cherry Heart Tarts.

MRS. JOHN W. MCTIGUE
Publicity Chairman

THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

IN & OUT OF FOCUS

By the Observer

The Loyal Opposition It has occurred to your Observer that in light of recent events there may be some misunderstanding among members as to the Society's relationship with the American Medical Association. As all members know, the Society is a constituent body of the Association. Fewer are aware that as such it is autonomous and need not concur in the policies of the Association which, incidentally, are determined by its House of Delegates and between its sessions, by the Board of Trustees.

For example, our Society by majority vote of a substantial number of its members disagreed with the Association's opposition to doctors' coming under the Social Security Act. Its delegates to the AMA and those of several states urged the House of Delegates to reverse its stand but their views did not prevail.

As reported previously in this column, our Society has long been of the opinion that unless the AMA gives dynamic leadership to the voluntary health insurance movement, Government intervention is probable. It has further expressed the view that primary support should be given Blue Shield Plans, all of which are medical society-sponsored.

In an effort to impress upon the AMA's policy-making body, its House of Delegates, the urgency of immediate action, a resolution was introduced by the Society's delegates at the annual meeting of the House in Miami last June urging the need for a specific national health program. The resolution failed to receive serious consideration. The Executive Board thereupon decided to pursue the matter further at the next meeting of the House in Washington, D. C., and instructed the Society's delegates to introduce another resolution. This time the resolution called upon the House to direct the Board of Trustees and the Council on Medical Service to "assume the leadership in consolidating the efforts of the American Medical Association with those of the National Association of Blue Shield Plans, the American Hospital Association, and the Blue Cross Association into maximum development of the prepayment concept to provide health care for the American people." The foregoing was embodied in the report of the Reference Committee on Insurance and Medical Service, of which Dr. Raymond T. Holden was Chairman, and was adopted by the House.

It is encouraging to learn that the resolution is being implemented, and as directed by the House, a meeting of representatives of the above groups has been held to consider the course which should be pursued in developing an adequate national program. It is the hope of those who labored for the passage of the resolution that the results of their deliberations will soon become evident.

Although the Society has differed with the AMA in regard to some of its policies, there is no question about its loyalty to its parent body. In any healthy democratic organization there should be the loyal opposition. This is the role in which the Society has long been cast.

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The Press and the Conference on Aging "The current political controversy over the method of providing medical care for the aged has encouraged the press to concentrate its attention on this phase of the [White House] Conference, and to neglect reporting in the other important aspects of the Conference's work. Hundreds of people are devoting their time to discussing many other problems which this Nation faces in attempting to provide a secure and fruitful life for older citizens." Thus Mrs. G. T. Stevenson, Deputy Executive Director of the American Library Association, characterized press coverage of the Conference in a release issued by the American Library Association. Neglect by the press, she said, was responsible "for distorting the meaning and good work of the 2,800 delegates."

There is much truth in this statement, as an examination of Washington newspapers reveals. For example, one newspaper engaged in what might be termed a crusade beginning early in December. A feature writer on its staff was assigned to write a series of preliminary articles dealing mostly with medical costs to the aging. Other papers in the Nation's Capital were for the most part content to write straight news stories on the subject before and during the Conference.

Eve Edstrom, writing in *The Washington Post* for December 11, reminded readers that President-elect Kennedy was firmly committed to the Democratic Platform to "provide medical care benefits for the aged as part of the time-tested Social Security insurance system." Noting that the President-elect had been invited to the Conference, she observed that he might find himself before an audience that has produced a policy statement opposing his views. "This," she wrote, "is because many people believe that on crucial health issues the Conference will not speak with the voice of the 'grass-roots' but with the voice of the American Medical Association, which is the Nation's foremost foe of tying medical care benefits to Social Security.

"Such charges have been made in several states where Governor's Conferences on the Aging were held to prepare recommendations for the White House Conference.

"For example, in Sacramento, Calif., the closing session of the Governor's Conference was rocked with angry exchanges between labor leaders and the California Medical Association.

"In a minority report, the labor leaders charged that 'a flying squad of otherwise dignified medicos ran from section to section casting votes . . . deliberately confusing our sessions.' Such a 'disgraceful Khrushchev-like exhibition created a majority recommendation totally unrepresentative of this Conference,' the report continued."

A companion news story in the *Post* on the same date related that one-half of the District's delegates to the White House Conference on Aging represented medical interests, with 5 of the 12 delegates doctors and 1, the Executive Director of the D. C. Medical Society. Again it was reiterated that in various sections of the country there have been charges that medical interests have captured the state delegations to the Conference to prevent any favorable vote on controversial issues. District physicians who were delegates, it was reported, included Dr. Daniel L. Finucane, District Health Director; Dr. Joseph Johnson, former Dean of Howard University's Medical School, now in private practice; Dr. Jack Kleh, Chairman of the D. C. Medical Society's Committee on Aging and also Chairman of the District's Council on Aging; Dr. Andrew G. Prandoni, a private practitioner; and Dr. Otis R. Farley, a member of the medical staff of St. Elizabeths Hospital.

Dr. Prandoni, it was stated, was Chairman of the Section on Health and Medical Care and Dr. Farley, Chairman of the Section on Rehabilitation. Your Observer was listed as Chairman of the Committee on Economic Problems of the Aging.

Interestingly, no newspaper reporter approached your Observer in an effort to learn what the findings of his committee were or its recommendations. If they had, the information would have been or at least should have been enlightening. This committee, on which many interests in the community were represented, took no action on the financing of medical care under Social Security. However, it did concern itself with economic problems of the aging, i.e., financial status, medical care costs, and employment.

As the opening day of the Conference approached, the press coverage was stepped up. Mrs. Edstrom wrote that "The 'organized medical profession' has 'captured' the White House Conference on Aging and is engaged in the 'villification' of those who do not agree with its position on financing medical care foı the aged."

> "This charge," she reported, "was transmitted to President Eisenhower in a letter written by one of the Nation's top Social Security experts, Wilbur J. Cohen.
>
> " 'The organized medical profession, in conjunction with private insurance and business interests, have so arranged it that over the past few months they have captured a disproportionate share of the delegates to the Conference,' Cohen wrote.
>
> " 'They are engaged in a process of villification and intimidation of anyone who does not agree with their position on financing medical care for the aged. I am shocked at the methods they are using in state after state to thwart the will of the majority of people on this issue.' "

AMA denials of these charges were also reported. The Association labeled Mr. Cohen's charges against organized medicine, private insurance and business interests as having "captured" the White House Conference on Aging as false.

On December 7 the *Post* described the interests represented at the Conference as follows:

> "A breakdown of the occupations of 163 participants assigned to the 7 work groups shows that 39.3 per cent represent physicians, dentists, insurance companies and business executives while 27 per cent represent labor and social welfare groups. . . ."

The Washington Evening Star was comparatively silent until just before the Conference. However, on January 10, Staff Writer Charles G. Brooks reported that an official of the AMA charged AFL-CIO President George Meany with "attempting to undermine" the White House Conference on Aging solely to push the cause of labor.

> "Dr. J. Lafe Ludwig, Chairman of the AMA Council on Medical Service, declared, 'If this conference fails, the responsibility rests squarely upon the shoulders of George Meany.'
>
> "The Los Angeles doctor, who is a delegate to the Conference, charged Mr. Meany with engaging in a 'reckless campaign of rule or ruin and the public-be-damned.'
>
> "His comments came after Mr. Meany blasted the AMA stand on the Social Security approach to the health insurance at a concurrent meeting at the Shoreham Hotel. . . .
>
> "Dr. Ludwig said the Aging Conference was called so that all groups dealing with the problem might cooperate and take realistic action to help the country's older citizens.
>
> " 'Meany, through his campaign of smear and hostility is making this difficult if not impossible,' Dr. Ludwig said."

As stated in the beginning, the Section on Financing Medical Care captured the headlines because the press thrives on controversy.

However, Mr. Cohen's views were proved groundless, which was no surprise to physicians. Medical interests, as events developed, did not run the "show."

In explaining the fact that the "stacking" complained of in earlier news reports had not materialized, Mrs. Edstrom wrote in *The*

Washington Post for January 13:

". . .Pre-conference predictions that the 4-day meeting would be a medically-rigged Donnybrook which would shun the Social Security approach were not fulfilled.

"There were many reasons why the Conference did not give organized medicine the victory it was seeking, why a recommendation favoring the Social Security approach was approved, and why a recommendation condemning that approach was watered down.

"But a chief reason was that delegates could not close their eyes to the fact that a Conference, conceived during a Republican Administration, must make its report to a Democratic Administration within 90 days.

"Furthermore, the delegates could not ignore the fact that the new man who would be in the White House in a matter of days was a man with definite ideas on how to deal with many problems of the aged, including their health care needs.

"And if any delegate had any doubt that President-elect Kennedy was not prepared to continue his fight for Social Security financing of medical care, they had only to read his task force's report on the subject—released, either coincidentally or deliberately, on Tuesday, the day before the Conference began final voting on the subject."

The *Star* pointed out that the minority, which protested the Social Security approach, "still claimed a victory" although the delegates to the Section on Financing Medical Care who favored this method of financing medical care won by a wide margin, 170 to 99.

Excerpts from the *Post* and the *Star* following the concluding sessions of the Conference are revealing.

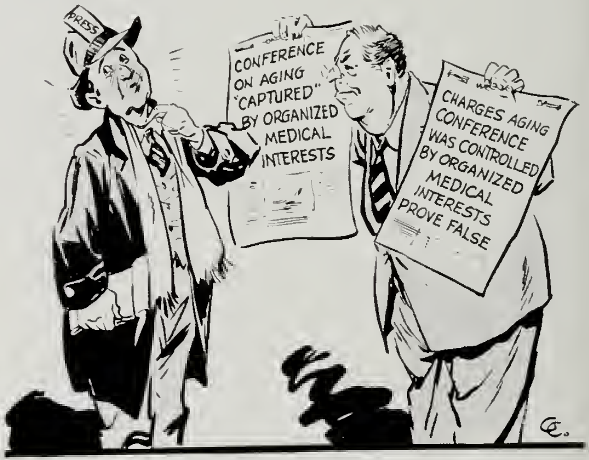
The *Post* on January 14 editorialized as follows:

"There can be no doubt that the American Medical Association, or at least the most vocal faction of the AMA, suffered a defeat at the Conference. It is even possible, perhaps, to hope that the AMA learned a lesson. The foremost instructor was Marion B. Folsom, an eminent and indubitably hard-headed businessman, former Secretary of Health, Education, and Welfare in the Eisenhower Administration. He told the delegates that Social Security afforded the only 'logical' plan for financing health care for the elderly. And he also told them clearly and unequivocally what was perhaps news to some of the doctors there, that under the Social Security program 'the individual would still have the same free choice as to hospitals and doctors that he now has.'

"Mr. Folsom rendered a significant public service at the Conference. His common sense respecting the medical care problem was reinforced by the significant contributions of Arthur Larson, another former official in the Eisenhower Administration, and Prof. Wilbur J. Cohen, who headed the Kennedy task force on the health care problem. Together these men made it indisputably plain that it is nonsense to apply the label 'socialized medicine' to the financing of health care through Social Security. Not all the doctors may have learned the lesson; but their spokesmen will certainly find it more difficult from now on to befuddle the public on the matter."

The *Star* on January 12 had this to say:

"The voting, limited though it was, did accomplish one thing. It refuted the emotional charges that doctors and insurance companies had 'captured' control of the Conference, for the sub-group of delegates charged with voting on the Social Security question supported this approach by a substantial margin. On the other hand, although its language will not appear in the formal record, a second voting group (in which a large number of doctors was concentrated) attacked the Social Security proposals in a separate statement as an 'unnecessary and undesirable' move.


PRESS
CONFERENCE ON AGING "CAPTURED" BY ORGANIZED MEDICAL INTERESTS
CHARGES AGING CONFERENCE WAS CONTROLLED BY ORGANIZED MEDICAL INTERESTS PROVE FALSE
CE.

"If a psychological victory was won apart from the voting, however, it assuredly went to the proponents of the Social Security approach, the chief among whom is President-elect Kennedy. To the public eye, at least, the Social Security issue dominated the Conference to the exclusion of virtually everything else, and this in itself served to dramatize the controversy and to accentuate the earnestness of the problem. . . .

". . .Enactment of an administration bill is by no means assured, and there are more valid reasons for opposition than the tirade against 'socialized medicine' which so largely characterized the American Medical Association position at the Conference. Chief among them is the rapid growth already taking place in the Social Security tax rate (from an employer-employee total of 3 per cent on maximum earnings of $3,000 in 1950 to a total of 6 per cent on earnings of $4,800 today). By 1969, the total is conservatively expected to reach 9 per cent. If an adequate alternative can be found to handle the medical care problem, therefore—especially one which would retain some measure of local control in the states—we would much prefer to leave the Social Security schedule alone. Whether such an alternative can be found, however, remains to be seen."

The *Star* also observed that the Kerr-Mills Bill which was "rushed through the rump session of Congress in August [1960]" hardly met the needs of the aged and that a satisfactory solution to the medical care problems of the aging remains to be found.

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CBS Reports Members of the medical profession who viewed the recent telecast over the CBS network entitled "The Business of Health: Medicine, Money and Politics" were, to put it mildly, distressed. Having been notified by the American Medical Association to be certain to see this program, your Observer expected a reasonably objective report on the controversial issues involved. It soon became apparent to him, as it did to a number of physicians who called him after the telecast, that whoever was responsible for editing the program had other ideas, for the AMA was pictured as hopelessly reactionary and, by implication, its members as mercenaries.

It is difficult to recall the Report in detail, but some sequences stand out clearly. In opening the program, Howard K. Smith, the moderator, gave his viewers a rundown on physicians' fees, which, in general, were fantastically high. Certainly, they had nothing in common with the ordinary fees charged by Washington physicians or those of physicians in smaller cities and communities. The Report, therefore, got off to a harsh beginning where doctors were concerned.

It soon became obvious that the producers had tried to cover too much territory, and, as a consequence, the sequences were jumpy and disconnected. Even then, if there had been an objective appraisal of the situation, the AMA and its members would have fared a great deal better.

Interestingly, not a single patient was shown who reportedly had satisfactory financial relationship with his physician. This was obviously biased reporting. Millions of people in this country will not agree with this premise.

The "shots" of Dr. Leonard Larson, President-elect of the AMA, were unimpressive. It was not known to your Observer at the time that he had been interviewed for some 5 hours but less than 2 minutes were allotted for his appearance on the program. Furthermore, his replies to questions had been screened for showing by someone on the CBS staff who, as previously stated, was evidently not in sympathy with the Association.

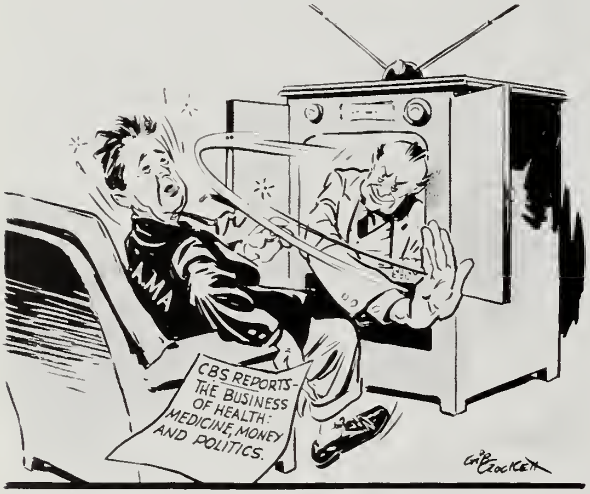
Criticism of the AMA was voiced by a physician who holds no official position in a medical organization and is not engaged in private practice. Why he was selected to participate in the program was not explained. Some of his comments were, to say the least, brash.

It seemed, also, that whoever edited the tape went out of his way to select "shots" of a few individuals whose statements had no basis in fact. For example, a union leader was quoted as saying a "big shot" physician in a mining area had hired uneducated young physicians to work for him. Those responsible for the program must have known that any physician, young or old, must have a license to practice and therefore has a medical education.

One cannot believe that physicians could make as poor a showing before a state legislative committee in New York as was demonstrated on this program. They appeared to this onlooker as tongue-tied and pathetically unsure of themselves. Certainly this could not have been true throughout the hearings. Distortions in other parts of the program lead the Observer to suspect that whoever did the editing was not without bias in his choice of sequences used.

Finally, no ordinary practitioner going about his daily work in his office and the hospital was interviewed. The rank-and-file have their thoughts about current issues too, and a carefully chosen representative of the majority of practicing doctors should have been given an opportunity to be heard.

All in all, it was regrettable that CBS did not make a more objective report. Certainly, the AMA is vulnerable to justifiable criticism in the field covered but there is such a thing as fair play.


AMA
CBS REPORTS- THE BUSINESS OF HEALTH: MEDICINE, MONEY AND POLITICS.

As was to be expected the AMA complained bitterly:

"Although thousands of feet of film were taken of the AMA President and President-elect," a release states, "only brief segments totaling 4½ minutes—usually out of context—were used on the program. At no time during the preparation of the CBS Reports program was the American Medical Association consulted on the script, nor were staff members given an opportunity to review the film prior to its presentation on February 2."

If any criticism should be directed at the AMA in connection with the Report it is that knowing the controversial nature of the subjects to be discussed it should have reserved the right to preview the program or have refused to participate.

Finally, no reasonable physician would take the position that only the AMA's point of view should have been presented. As a matter of fact, there are strong differences of opinion within the profession about the Association's program in the economic and social fields, as noted elsewhere in this month's column. However, the Association has the right to expect that even in these areas it should be dealt with more objectively than in the CBS Report.

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An Historic Document

Historically-minded members of the Medical Society of the District of Columbia should be interested in the recent acquisition by the Society of a well preserved copy of its 1861 Constitution and By-laws and that of the Medical Association of the District of Columbia. The Society, which was founded in 1817, had been in existence some 44 years at the time it was published, and the Medical Association, founded in 1833, 28 years. However, the document, donated by Mack Krents, a Washington business man, who found it among the effects of a local physician which he had purchased, is of particular significance now, this year marking the centennial of the beginning of the Civil War.

The reason for the existence of the two medical societies in the District is readily explained. The Constitution of the Society stated that it was organized for "the granting of licenses agreeably to the provisions of the Charter, and the consideration and promotion of all subjects connected with medicine, and the collateral branches of the science." In chartering the Society, Congress strictly limited its activities to the above objectives. The Society was explicitly prohibited from establishing a fee schedule or in anywise regulating the practice of medicine.

These prohibitions were responsible for the establishment of a second medical organization. As Dr. John Benjamin Nichols wrote in his medical history of Washington, the Medical Association was independently formed to deal with financial, economic and ethical problems of District physicians.

It will be noted that the Society at that time licensed doctors. To determine the qualifications of applicants for license, a Board of Examiners, consisting of 5 resident members, was elected annually. It was their duty "to grant licenses upon the payment of five dollars, to such medical and chirurgical gentlemen as they may, upon a full examination, judge qualified to practice the medical and chirurgical arts." Incidentally, the so-called resident members consisted of "medical gentlemen residing in the District of Columbia" who were accepted for membership on "the production of a diploma from a respectable medical college or a license from the Examiners of the Medical Society, and of his having paid the Treasurer a fee of five dollars."

It appears that there must have been some difficulty keeping the Society meetings in proper order. For example, there is a provision in the By-laws that "no member shall interrupt the President, or any other members, while speaking." Further, "No member or members shall be permitted to sit or stand with his or their heads covered." Finally, "No member shall be permitted to retire after calling his name, without permission from the President, until the Society has adjourned."

The Medical Association, being concerned primarily with the nonscientific problems of medicine, enforced compliance with its regulations, including a fee schedule, from which the following items have been taken:

First consultation visit	$5.00
Each one after the first	2.00 to 3.00
Rising, and visiting at night*	5.00
Rising in the night, and advice at physician's house	2.00 to 5.00
Case of midwifery, natural	10.00 to 25.00
Do. praeternatural	15.00 to 200.00
Extracting placenta alone	5.00 to 10.00
Detention in any case at patient's house during the night	5.00 to 10.00
Vaccination	3.00
Amputation of fingers or toes	5.00 to 20.00
Reduction of dislocation	10.00 to 50.00
Dressing recent wounds, opening abscesses, introducing setons or issues	2.00 to 10.00
Extirpation of tumors of minor importance	5.00 to 50.00
Operation for hydrocele	5.00 to 30.00
Operation for harelip	10.00 to 50.00
All certificates of life insurance, or other similar certificates	2.00 to 5.00

As has been indicated, this is only a partial list of fees which the regulations state "shall be demanded. . . . [However] they shall be diminished at the discretion of the physician, when he believes that the patient cannot afford to pay the regular fees, and yet is able to make some compensation. It shall be considered, however, as unprofessional to diminish the standard fees, except from motives of charity and benevolence.

"It is not designed by these regulations to prevent gratuitous services to those who are incapable of making remuneration without distressing themselves or families. . . .

"No member of this Association shall make a contract to attend an individual or a family by the year, or on any other terms than those authorized by these regulations."

There is, of course, much more, but the above excerpts should serve to indicate that in those days the physicians were concerned about their economic problems. Readers will undoubtedly be struck by the fact that, considering the period, fees were fairly substantial. However, it must be kept in mind that the number of persons unable to pay for physicians' services was considerable, and that where a physician had to make a visit to a home he went by horse and buggy, which not infrequently was time-consuming.

The Medical Society and the Medical Association were amalgamated in 1911, largely through the efforts of Dr. Nichols. At that time the Society "took over the functions, activities and powers" of the Association.

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* Night was understood to commence at 10 o'clock and end at sunrise.

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Yankee Stay Home

Just a year ago, in this column, your Observer had something to say about the "Guide for Civil Defense Action in the Washington Warning Area," which had been mailed to all citizens in this part of the country. The Guide contained vital information for survival in the event of an enemy attack, such as a description of radio warning signals, radio frequencies on which warnings would be given, protection against radioactive fallout afforded by ordinary buildings, the construction of home shelter, methods of decontamination, and other essential survival items. These instructions, it was agreed, would undoubtedly save many lives unless the devastation was complete. However, it was evident then, as it is now, that C.D. will not be taken seriously until the Federal Government sponsors an effective organizational campaign.

What interested your Observer most were the directions for the evacuation of the population should an alert signal be given. The Guide stated that the signal "means an enemy attack is on the way—but there still is time to move to relatively safer areas. This signal means your Government recommends evacuation." Enclosed was a map showing routes to be taken by citizens of the Washington Metropolitan Area in event evacuation was necessary.

In commenting on these instructions your Observer wrote: "One can imagine the traffic jam which would result if there were a warning to evacuate." Confusion and even panic, he observed, "would stagger the imagination," even though, as the Guide stated, "a maximum effort will be made in these areas to give evacuees food, shelter, clothing, medical attention and other necessities."

If a demonstration of the impracticability of evacuating Washington in the event of enemy attack were needed, it was forthcoming on the evening prior to Inauguration Day. Your Observer was one among hundreds of motorists whose car batteries gave out on the way home on that bitterly cold and snowy evening. He, unfortunately, was stranded on the approach to the Taft Bridge on Connecticut Avenue with cars bumper-to-bumper as far as one could see. He was more fortunate than most in that he finally obtained aid and managed to remove his car from the line of cars which were backed up for many blocks. Most did not have such good fortune. Having received the needed assistance, he again inched along with the endless line of automobiles. Abandoned vehicles, he observed, were strewn along both sides of the street.

The one thing which impressed him more than any other was the complete paralysis of traffic, which at times did not move for an hour. He has his own personal opinions as to the reasons for this aside from the inclement weather. However, the point of these comments is that it was a perfect demonstration of the futility of any method of evacuation from the city in event of an enemy attack. Even if there were no circles at various points along the main arteries to impede traffic, it would still be an impossibility. One stranded automobile in the midst of the stream of traffic could effectively block the escape of hundreds of persons. Need it be said that providing medical services in these circumstances would be next to impossible?

The best advice, it seems to your Observer, is to tell the people to seek refuge in their own homes or in the nearest shelter; in other words, to paraphrase a not-too-friendly neighbor to the south, "Yankee stay home."

T. W.

THE RELATIONSHIP OF THE ALUMNI TO THE MEDICAL SCHOOL*

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Professor of Medicine and Chairman of the Department, University of Illinois College of Medicine

The relationship of the Alumni to the Medical Schools is a time-honored theme. I approach it with trepidation because talks on this subject are usually given by Presidents or Deans, while I am speaking as a fellow alumnus, having no offical connection with our Medical School. Yet this gives me a certain advantage, which might be illustrated by the story of the man who had just returned from a vacation and was asked by a fellow-worker whether he had enjoyed himself. To which the returnee replied, "Did you ever spend four days in a station wagon with those you thought you loved best?"

I have recently learned that the word alumnus originates from a Latin word meaning foster-child. As one foster-child of the Medical School to another, I should like to consider with you the position of the alumni with regard to the Medical School. Each of four groups comprising the Medical School might be thought of as sides of a square: the alumni, the faculty, the administration, and the students; and if this square is strong on all four sides, one has a strong medical school. Let us examine in turn the relationship of the alumni to each of the sides of the square.

The Faculty

First, the faculty. The alumnus often looks at the faculty from a distance and through a telescope. "What kind of man is this," he says, "who will give up the opportunity of working with his own patients, being his own boss, and making a good living for himself and his family in order to putter around with a lot of test tubes or stick needles into a bunch of mice?" It is true that the laboratory scientist may be absorbed in his laboratory work to the exclusion of everything else. There is a current story of the scientist who signed the register at a meeting with two X's. "I understand that you have never had time to learn English," said a fellow member of the society, "but what does the second 'X' mean?" "Oh, that's my Ph.D.," said the scientist.

Or the alumnus may think that the members of the clinical faculty get all the gravy. All of the newest and most elaborate facilities are put in their hands, patients flock to them because of the prestige of the institution, students stand around in open-mouthed admiration, and the faculty members lean back and bask in the sun of adulation, security, and abundance.

Throw away your telescopes and go meet the faculty! You will find that the laboratory scientist is as interested in the proper treatment of patients' ills as you are, but that he wants to improve the foundations of the house while you meet the patients in the upper stories. As for the clinical professors—if the professor of medicine can be taken as an example—you will find that he practices his history-taking by interviewing prospective interns; that he keeps abreast of physical diagnosis by inspecting periodically the physical equipment of the wards; that he brushes up on laboratory diagnosis by countersigning innumerable requests for research grants made by the bright young men in his department; and that he "keeps up with the literature" by reading the memoranda sent around by the Dean and the President. To find time to see a patient he must swear his secretary to secrecy and turn a deaf ear to the paging system. No, he is not getting all the gravy.

And—if the professor chooses to spend time in teaching and investigation because he thinks these things are important, is he thus to be considered a freak? What about the hundreds of practicing physicians who devote themselves unselfishly to Medical Society affairs, to public health matters, to medical insurance plans? I could name dozens of them in this city. By spending time in this way they too are placing their ideals ahead of their pocketbooks. But, do we consider their ideals misplaced?

What about the criticism that the faculty competes with the practitioner for patients? To teach students clinical medicine the faculty must have patients; and with the decrease in the truly indigent, patients for teaching must increasingly be drawn from those who can pay, partially or wholly. We must face this problem honestly and squarely. Dr.

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* Address delivered at the George Washington University Medical Alumni luncheon at the Hotel Statler-Hilton, November 28, 1960, during the 14th Clinical Meeting of the American Medical Association.

Child, Professor of Surgery at the University of Michigan, believes that an adequate supply of patients for teaching must depend upon (1) the placing of our teaching hospitals before the public as superior institutions, and (2) the acceptance by those in private practice of the necessity of teaching hospitals to compete with them for patients. If we consider the second of these first, you will agree that the great advances in medicine in recent years have been made by research in the laboratories and on the wards. Although teaching hospitals are not the only place where this can be done, the focusing in these hospitals of enthusiastic workers, representing different disciplines and viewpoints, the aggregation of intricate and expensive equipment, and the funneling into the teaching hospitals of those patients with the kinds of disorders which can best be studied there—this is the combination which is likely to yield results. The results mean victory for science, life and health for patients, honor and prestige for the medical profession, and for the individual doctor, increased mastery of his work and increased pride in the effects of his practice. Everyone benefits from the scientific method, straightly followed, then skillfully applied.

But if the alumni are to respect the faculty, the faculty is under the obligation to earn this respect. This is inherent in Professor Child's other requirement of a teaching hospital: that it be a superior institution. Obviously this applies also to the preclinical departments.

In a report on "The Quality of the Faculty" recently prepared at the University of Illinois, it was stated that "all agree that universities are ranked according to the scholarly distinction of their faculties" and scholarly distinction was taken to mean "the place the faculty has earned for itself in the world of the educated elite and in the total adventure of the human mind." In other words, a superior faculty must continually ask itself, "How is our work judged by our colleagues?" and "How will it be judged in the years and centuries to come?" To deserve honor at these hands requires from the teacher absolute dedication to high ideals, devotion to hard work, and complete use of the talents nature has given him. The man who is striving for these honors needs your support; the man who has obtained them deserves your praise.

THE ADMINISTRATION

The building of a faculty of quality requires more. It requires dedication to the same high ideals on the part of the university administration. I should like to turn next to the administration's side of the square. The success of universities—like the success of nations—has depended upon adequate resources, both material and human, and a forward-looking philosophy or set of goals. Resources without goals produce sterility; goals without resources end in futility; if neither is present, futility merely perpetuates sterility.

The alumni look to the administration to state the goals of the institution, to obtain and husband the resources, and to show how the resources are being used to achieve the goals. How can the administration of the medical school decide upon its goals? According to Archibald MacLeish, education is the community's projection of itself into the future. He says, "Science is universal . . . technology is universal . . . but education is not universal. It is a function (far and away the most important function) of the community in which it exists, and a radical change in educational policy cannot be ordered as an automobile manufacturer orders a new model. When it comes, it will come out of a change in the community's conception of itself." The ultimate strength of a university, then, is an informed community. For the private university it is the alumni who reflect the opinion of the community, and in the private medical school the alumni represent a special kind of a community, an informed and dedicated profession. Providing the alumni remain well informed on issues of education as well as of practice, providing they are interested in world-wide and future issues as well as present and provincial ones, providing they give positive suggestions as well as negative criticisms, they will make their greatest contribution to the university by keeping the administration aware of public and professional opinion.

The administration, in turn, is obligated to steer a straight course according to prearranged policy rather than tack back and forth wherever the winds of popular opinion are blowing hardest. The administration must tell the alumni at frequent intervals how the ship stands on its course. Again in the private university, the alumni represent and symbolize the public as a whole. It has become the fashion in some schools to maintain that the private universities should be divorced from the desires and interests of the public. Let the public universities pay attention to the public since they must, but the private universities should devote themselves to teaching and research as they conceive them! Nothing could be better calculated to destroy the private university. Alfred North Whitehead uses as a parallel the monasteries which at their zenith were numerous, rich and powerful and appeared to be perpetual; but they lost touch with the people, and as a result their power and influence waned. He warns us that the universities now occupy a position similar to the monasteries of the Middle Ages, and the same thing could happen to us today.

When we consider the resources of the university, again the alumni and the administration stand shoulder-to-shoulder. The alumni as an interested group and as an informed group should help raise funds for the university. When they do, they not only help the university materially, but, also, as Dean Berry at Harvard Medical School has pointed out, they become more interested in the medical school. Where the purse is, there the heart is also; or to put it in modern language, a check should be followed by a check-up.

The Medical Student

We have spoken about the relationship of the alumni to the faculty and to the administration of the medical school. On the fourth side of the square is the medical student. What does the alumnus think of him? The most common criticism by the alumnus is that the student is not taught "practical" medicine; his most common advice to the student is to "forget all that basic stuff—you'll not need it when you deal with patients." Shades of Harvey and Hippocrates! Does the thirsty traveler not see that the brook arises from a spring; does the builder not know that the skyscraper requires a deeper foundation than the one-story rambler; and does the wide-awake doctor not use, every day, instruments, tests, technics, drugs, developed in the laboratory?

Or does the doctor think that his function is to use, without thinking, the instruments and drugs devised by others? Would you have the faculty try to stuff the student with facts? The humorist Peter Finley Dunne has the dean ask the entering student: "Now, in what subject do you want our learned professors to do your thinking for you?"

One of my colleagues at the University of Illinois, Arthur Bestor, wrote in his book, "Educational Wastelands," "Genuine education consists in the communication not of conclusions but of the power to reach conclusions." Think of the best doctors you know. Have they not been good doctors because they had the power to reach the right conclusions? The task of the medical school is to plant and nurture the beginnings of the power to reach conclusions so that with proper cultivation it may grow during the years of practice. When the alumnus understands that the medical schools cannot stuff the student with one-millionth part of the accumulated knowledge available in medicine today; when the alumnus realizes that some students accumulate facts as sticky paper accumulates flies (and that afterwards, their minds may be just as much of a mess as flypaper); when the alumnus sees that the process of accumulating facts may sometimes drive out the desire to reach conclusions, then the alumnus will be in a position to help the student. How? First, he can encourage the right students to enter medical school; second, he can inspire them to make the supreme effort while in medical school, because they see in him the realization of the ideals they want to attain; and third, he can interpret for the students the relevance of what they are learning to the eventual practice of medicine. As he alone of all members of society knows how rugged the path to graduation is, so he can best shed light and give encouragement to those who climb it now.

A Challenge to the Alumni

We have considered the four sides of the square and how the strength of the institution depends on all of them. And today the medical school needs strength more than ever before. For change is the order of the day in medical education and research, and with change the opportunity to go forward or to fall back.

Did you ever watch a cross-country race? You recall how the runners are bunched together at the start. They find their positions early and usually stick to them with few changes, but the most obvious difference as the race goes on is that the distance between the runners gradually lengthens so that at the finish line the winner may be as much as half a mile ahead of the last man. As the runners travel the course, many of them cannot even see the leader. All they know is that they have a certain course to run and they try to finish it. Each medical school is running a race with the others today. The race is being speeded up as more and more help is being given from outside. Clinical centers and career professorships are being offered by the Federal Government, student scholarships are being considered by the American Medical Association, surveys of educational methods are being undertaken with funds from the great foundations, private foundations are raising ever larger amounts of money for research. And yet, what I seem to see is that, while each of the schools is helped, the leaders in the race seem to profit most from the help, and the distance between the first and last seems to be widening all the time. The faculty, the administration, and the students have been doing their best to keep up in the race; it is the latent strength of the alumni that is needed to bring us up to the front. I hope that you will not withhold it.

THE FIFTH STAGE OF LABOR*

ROBERT B. NELSON, M.D.
Washington

INASMUCH as the only demonstrable function of the uterus is to carry and ultimately expel the fetus, it might be reasonable to relate to labor its entire existence during a woman's fertile years. If the immediate postpartum phase when the continued contraction of the uterus must be assured has been called the fourth stage of labor, the interval between pregnancies could be considered the recuperative or fifth stage of labor. Most obstetricians consider planned spacing of children beneficial to the mother as well as to her family and believe provisions for this to be a part of good obstetric care.

For clinic patients, the most logical time to provide contraceptive care is in conjunction with the routine services provided at the 6 weeks' postpartum visit. For a number of years a family planning clinic was conducted in the Outpatient Department of Garfield Memorial Hospital. Upon the opening of the Washington Hospital Center, this clinic was included in the Outpatient Department of the new hospital and later was incorporated into the regular 6 weeks' postpartum clinic, thus making family planning a routine part of the care of all service cases desiring it.

The clinic is under the supervision of a single attending staff member throughout the year. Continuous attendance by the same staff member provides continuity to the service and assures standardization of technics. The house staff is instructed in contraceptive technics and patients desiring this care are given instructions and contraceptive materials by the resident staff.

The interviewing and social history-taking are done by experienced volunteers from the Women's Division of the Hospital. These volunteers also attend the patients and assist the doctors in cooperation with the clinic nursing staff. Student nurses attend the clinic and assist with the patients. Supplies are furnished by the Planned Parenthood Association at a minimal cost to the patients. The clinic maintains the usual supply of diaphragms, creams, jellies, etc.

Patients return to the clinic for a further check the week following their initial visit so that close follow-up care is provided. They are instructed to return every 6 months thereafter. Follow-up letters are sent to patients failing to return for the check-up visits.

This clinic thus provides 2 very important functions: the proper care of patients and the instruction of physicians and nurses. Medical students and house staff from other hospitals not having these facilities are welcomed to this clinic.

The fact that there is a desire on the part of many patients for these services is shown by the following figures. In a 6-month period, January 19 to July 19, 1960, 452 patients returned for the 6 weeks' postpartum examination. Thirty-four of these had had tubal ligation following delivery, leaving 418 patients eligible for child-spacing care. Of these, 239 or 57 per cent desired and received it.

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* From the Departments of Obstetrics and Gynecology, Washington Hospital Center, Washington, D. C.

In conclusion, on the thesis that family planning is a part of good obstetric care, this service is offered at the time of their 6 weeks' postpartum visit at the Washington Hospital Center to all clinic patients desiring it.

1824 Massachusetts Avenue, N.W.
Washington 6, D. C.

FIRST WOMAN APPOINTED WHITE HOUSE PHYSICIAN

President John F. Kennedy, on January 26, 1961, announced the appointment of Dr. Janet Travell of New York, doctor of orthopedic medicine, as White House physician. She is the first woman and the first civilian to hold that post.

In the field of orthopedic medicine, Dr. Travell works on the problem of pain that arises in the skeletal muscles. She is not a surgeon.

In addition to her practice, for the past 9 years she has been on the teaching staff of Cornell University Medical College as Associate Professor of Clinical Pharmacology. She has also served as associate physician at the cardiovascular research unit at Beth Israel Hospital in New York.

A pioneer in the work of charting patterns of pain in the body, Dr. Travell has treated the President for a back injury which has been troubling him for many years. In her treatment she discovered that one of Mr. Kennedy's legs was slightly shorter than the other, which put additional strain on the back muscles.

Born in New York City on December 17, 1901, Dr. Travell received her B.A. degree from Wellesley College and her M.D. degree from Cornell University Medical College. At college she won the John Metcalf Polk Memorial Prize for the highest academic standing in 4 years in medical college.

She began her medical career at the New York Hospital as a house physician, from which she went on to a post at Bellevue Hospital. From 1939 to 1941 she was a fellow in arterial disease study for the Josiah Macy Jr. Foundation, Beth Israel Hospital.

She was assistant, then associate visiting in cardiology at Sea View Hospital in Staten Island from 1936 to 1945. She began teaching at the Cornell University Medical College in 1930 as Instructor in Pharmacology.

Dr. Travell is a diplomate of the National Board of Medical Examiners and has received research grants from the National Heart Institute of the National Institutes of Health, the Josiah Macy Jr. Foundation, and the Lt. Joseph P. Kennedy Jr. Foundation.

JANET TRAVELL, M.D.
First Civilian White House Physician

She belongs to the Medical Societies of New York City, State and Westchester, and the American Medical Association. Other organizations of which she is a member are the New York Academy of Medicine, the American Geriatrics Society, the New York Academy of Sciences, and the American Association for the Advancement of Science.

Dr. Travell and her husband, John Powell, an investment counselor, are excellent athletes who enjoy swimming and tennis. They have two daughters, Mrs. James R. McAlee and Mrs. Edward H. Street, and three grandchildren.

DR. LEE HONORED AT HEART LUNCHEON

Dr. Thomas Sim Lee was the guest of honor at a luncheon in the Providence Hospital Nurses' Home, January 31, which was sponsored jointly by the Hospital and the Washington Heart Association. It also marked the opening of the 1961 Heart Fund Drive. At a brief reception before the luncheon, Dr. Lee was greeted by some 70 guests—physicians, medical educators and business executives. Present were deans of the medical schools, chiefs of cardiac services of Washington hospitals, and other prominent heart specialists, not a few of whom Dr. Lee could recall as his former students. The gathering was a warm and enthusiastic tribute to Washington's Dean of Cardiologists.

Dr. John F. Finnegan, Chief of the Medical Staff at Providence Hospital, opened the meeting and introduced the distinguished guests present. Among them were the Reverend Arthur A. O'Leary, S. J., former President of Georgetown University; Mrs. Earl Warren, wife of the Chief Justice and Honorary Chairman for Heart Sunday; and Mrs. Robert S. Peabody, of New York, sister of Dr. Lee.

Dr. Finnegan called on Dr. Clayton B. Ethridge, Board member of the Washington Heart Association, to serve as chairman for the meeting. Dr. Ethridge explained that this meeting had somewhat of a three-fold purpose: to honor Dr. Lee for long years of service to medicine and especially for his pioneer work in the field of cardiology; to help Providence Hospital begin its celebration of 100 years of service to the Washington community; and to open the 1961 Heart Fund Campaign.

Dr. John W. Latimer, President of the Washington Heart Association, presented Dr. Lee with the Heart and Torch Award of the American Heart Association. The citation which accompanied the award credited Dr. Lee with a number of "firsts":

—The first heart specialist in the Capital and one of the earliest in the United States.

—He founded the first Heart clinic in Washington in 1908 at Providence Hospital.

—The first to establish a program of visiting heart patients in their homes when they were unable to come to the clinic.

—Owner of the first electrocardiograph machine in Washington. Dr. Lee still has it; it is mammoth compared to present-day models.

—Founder and first President of the Washington Heart Association in 1926. In 1953 he was elected Honorary President of the Association; he is also an honorary member of the Board of Directors.

NATIONAL HEART AWARD TO DR. LEE

DR. THOMAS S. LEE's countenance reflects his pleasure upon receiving from DR. JOHN W. LATIMER, JR., President of the Washington Heart Association, the Heart and Torch Award of the American Heart Association at a luncheon at Providence Hospital, January 31.

From 1904 to 1950 Dr. Lee taught at Georgetown University School of Medicine, and now holds the title of Professor Emeritus of Cardiology.

Dr. Wallace M. Yater, a friend and associate of Dr. Lee for many years, gave a brief résumé of his life and accomplishments. Dr. Yater was one of the group of physicians who, in 1926, met in Dr. Lee's home at 2109 O Street, N.W., where he still lives, and organized the Washington Heart Association. Among others present at that time were Dr. John Minor, Dr. Leslie Gager, and Dr. Joseph McCarthy. From this small beginning has grown the present large organization, which is one of the early branches of the American Heart Association.

Dr. Lee was born in 1868 in New York City, where his father, a prominent physician, was a professor at Columbia University Medical School. He comes from a distinguished ancestry. His great-grandfather, of the same name, was Governor of Maryland during the American Revolutionary period. He is a great-great-grandson of Charles Carroll of Carroll-

(Continued on page 190)

CANCER PAGE

THE PHYSICIAN AND THE AMERICAN CANCER SOCIETY

THE SUCCESS of the American Cancer Society, from its earliest history down through the present, has been due in no small part to the active participation of the physician.

Certainly it was physicians who put the modern version of the Society "on the map." And in every one of its vital programs—research, education and service, the Society is dependent in great measure on the continuing coöperation of the medical profession.

As physicians, we have a natural interest in every effort to control disease. We have found that in a strong voluntary health agency, such as the Cancer Society, our coöperative efforts with lay volunteers have worked effectively to save more lives and to ease suffering.

While the primary objective of the program in the District of Columbia and throughout the Nation is the control of cancer, the Society's activities have a broad effect in many fields of medicine.

A practical example of the way research, supported by the Cancer Society, affects medicine at large is the recent project in tissue sensitivity which will prove to be very valuable in organ transplantation.

By the community education program, in which more than 100 physicians here take active part, the Cancer Society succeeds not only in alerting the public to the value of early detection and prompt treatment of cancer but also in developing a sound attitude toward all aspects of good health. The regular health checkups urged by the Cancer Society result in the early discovery of many physical problems not related to cancer.

The entire medical profession benefits, too, from the extensive professional education program which provides the latest information available on diagnosis and treatment of cancer.

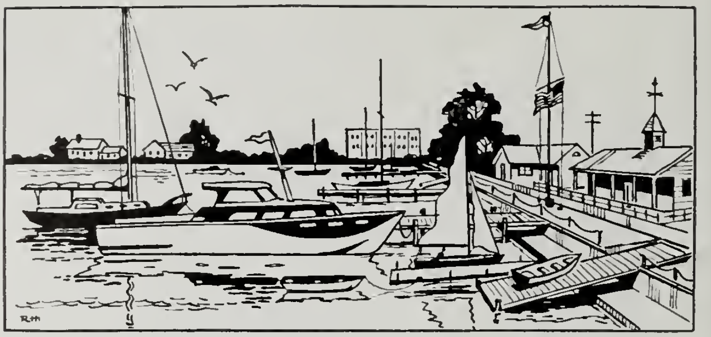
The direct service to the cancer patient and his family eases burdens and relieves tensions, making the work of the physician more effective.

Progress is being made—but the future depends on you.

As physicians, we should lead the way in supporting the American Cancer Society, not only through volunteer participation but through contributions to the 1961 Cancer Crusade.

If the American Cancer Society continues to receive your financial support, we can reach our eventual goal of controlling this disease more rapidly.

WILLIAM P. HERBST, M.D.
President,
American Cancer Society,
District of Columbia Division



ON THE LIGHTER SIDE

This is the macabre tale of a grim ride with Death down a treacherous mountain-side one cold winter night.

The Doctor has many and varied interests besides his active practice. Hunting is one of these and the sport often takes him out-of-town as an invited guest. Our tale begins at a hunting lodge high among the foothills of the mountains of West Virginia. It was the deer season, and the cunning animal seemed to sense it and often sought the highest altitude of the Blue Ridge range.

This particular deer season was frozen in—not with snow that forgot to fall but with chilling blasts of frigid air that seemed to force itself into the very marrow of a man's bones. The barometer was falling and the thermometer read 2 degrees below zero. The days, although short, were bright with sun that helped to warm if one were shielded from the cutting wind. The nights were ominous with howling, bitter gusts that quickly froze every drop of exposed water. Such a night encompassed the time of our story.

The Doctor had accepted an invitation for a week-end of hunting. His host, on his arrival at the lodge, introduced him to the few hard-core hunters who had braved the weather and who were already assembled. On one of this group the heavy hand of Fate was to be placed before 24 hours were up.

There are people who, by their normalcy, are never remembered except as a nondescript face in an indescribable body. But this was not true of Nick. Nick was a stocky, well-muscled man, swarthy of countenance, with a close-cropped head of black curly hair streaked with the telltale gray of maturity. Nick was jovial, laughed easily, but joked with a sinister sarcasm whenever he was not pleased. His love of hunting was obvious in his conversation, but his love for gambling was evident in all his actions. He was magnanimous in victory, ill-tempered in defeat. He made enemies just as easily as he made friends.

The evening meal was over and Nick suggested a friendly game of cards until bedtime. The Doctor was reluctant to join in the game, but because one of the group was not feeling too well he felt obliged to sit in. Card-playing was not his forte, but Lady Luck was on his back this night and the Doctor won as consistently as Nick lost. Finally, when it became apparent that Nick was getting caustic and bitter in his remarks, the Doctor decided it would be better for all concerned for him to drop out of the game. He gave utter fatigue as his excuse and said his good-nights.

The hunters were up and at breakfast before the first streaks of dawn cracked the blackness of the eastern sky. The Doctor and his host left the group and paired off to trudge farther and farther up into the desolate loneliness of the mountain looking for the elusive deer tracks. A hasty lunch behind the protection of an overhanging cliff gave the hunters sufficient energy to continue their unsuccessful search for deer in this insurmountable wilderness of rock and stone, tree and bush. And when the waning warmth of the sun yielded to the penetrating cold, the Doctor and his host decided that they had "had it" for the day and stumbled their weary way back to the lodge with its warm invitation of a friendly log fire and congenial drinks before dinner.

Hunger was consuming the Doctor, and the emptiness of his innards was matched by the weariness of his body. Only a hot dinner and a comfortable chair appealed to him now. But dinner and rest were not to be, for Fate had struck a mighty blow. The hunters had all returned—except Nick. No one remembered seeing him on the way down.

A search party was organized to go back up the mountain to look for Nick. They decided to take the lodge jeep, and, naturally, the Doctor guest was urged to go along in case Nick was injured.

Impenetrable blackness, so common in moonless mountain woods, shrouded the searchers. The men bumped and rattled over the rocky, frozen ground, forcing a path where none was intended. When the jeep could no longer traverse the irregular terrain, the men went on foot flashing their feeble shafts of light under every bush and around every rock and shouting vainly to the mockery of their own echo. When they looked back they could see the headlights of the jeep as the rays criss-crossed around the trunks of the trees.

Nick was found. He lay crumpled on the rocks as though he had fallen from a height. A ray of the flashlight had picked up his twisted form by mere accident.

The Doctor scrambled down the craggy cliff to where the still body lay. A quick examination and experienced observations revealed that there was no life left in Nick's body. Now what to do? Had Nick fallen? Had Nick succumbed to his arteries? Had Nick been shot? These questions were put to the Doctor, and he wisely suggested that the body not be disturbed until the county coroner had been notified. But the coroner was far away in the valley town at the base of the mountain!

It was decided that the Doctor should phone the coroner so that he could explain what he had observed. One volunteer was left to guard the body against marauding animals. The rest of the weary searchers, saddened by the tragedy, piled into the jeep and drove back down the tortuous trail to the lodge. Still no dinner, and the hour was now late!

A phone call was put through to the coroner, and the Doctor explained the dilemma. "I won't be up there tonight unless you think it was murder," responded the coroner. "But I will give you permission to examine the body, and if you are suspicious of foul play, leave the body where it is and call me back. If it is death from any other cause, bring the body in and I'll meet you in the morning at the lodge."

Now the responsibility had been placed squarely on the weary, hungry Doctor, who had been only a guest invited up for a week-end of fun, just 24 hours ago.

The Doctor climbed back into the jeep with the driver and up the black mountain they bumped and rattled. A waving flashlight led them to the brave volunteer, now half frozen by the coldness of the mountain air. A thorough check of the body by the light of a campfire convinced the Doctor that Nick was the victim of natural causes.

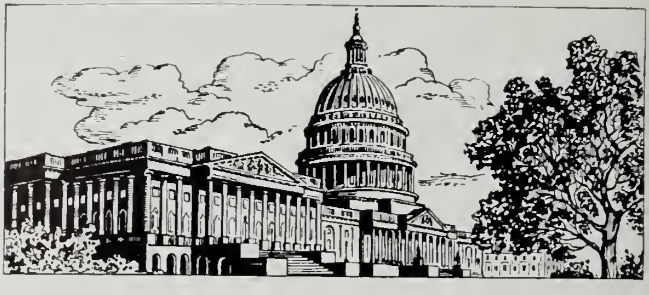
The job of lifting and carrying the limp, heavy body up the incline to the jeep was formidable for the three men. And, worst of all, it had to be done on an empty stomach! However, they managed the job but had to place the corpse on the back seat of the 4-passenger jeep because there was no room to stretch him out. So there he sat with head drooping, eyes open and sightless—like a dead man! which he was!

It fell to the lot of the Doctor to sit with the corpse—mainly because the other two had no stomach for the job.

The trip back to the lodge was so treacherous and bumpy that the good Doctor was compelled to put both his arms around the dead body, leaning heavily upon him, in order to keep it from falling out of the bouncing jeep.

Thus down the untracked mountain in the darkness of a bitterly cold winter night Death rode by the side of Dr. J. Spencer Dryden.

J. EARL KADAN, M.D.



NEWS & PERSONALS

Meetings

The 37th Kober Lecture will be held in Gaston Hall at Georgetown University, April 11, beginning at 8:15 p.m. The Lecturer this year will be the famed bacteriologist, Dr. Rene J. Dubos, of the Rockefeller Institute for Medical Research, New York City. He was selected for this honor by the Association of American Physicians. All members of the Medical Society of the District of Columbia are invited to attend this meeting.

The St. George Society will sponsor its last meeting of the 1960-1961 program series on Monday, March 27, in the auditorium of the D. C. Medical Society, at 8:00 p.m. There will be a panel discussion on "Cancer of the Female Reproductive System," with Dr. Andrew A. Marchetti, Professor and Chairman of the Department of Obstetrics and Gynecology of Georgetown University School of Medicine, as moderator. Panel participants will be Dr. T. Wilkins Davis, Associate Professor and Chief of the Division of Radiology at Howard University School of Medicine; Dr. James G. Sites, Assistant Professor of Obstetrics and Gynecology, and Dr. William Newman, Associate Professor of Pathology, both of George Washington University School of Medicine.

Members of the Medical Society are cordially invited to attend both the program and the social hour which will follow in the library.

The Anthropological Society of Washington is sponsoring a series of lectures devoted to anthropology and human behavior. The next meeting will be held, April 18, in Room 43 of the U. S. National Museum, 10th Street and Constitution Avenue, beginning at 8:15 p.m. The speaker will be Dr. William Caudill of the Laboratory of Socio-environmental Studies at the National Institute of Mental Health. He will speak on "Anthropology and Psychoanalysis: Some Theoretical Issues." Members of the Society who are interested in this subject are invited to attend.

The 163rd Annual Meeting of the Medical and Chirurgical Faculty of the State of Maryland will be held on April 26, 27 and 28, 1961. All physicians, residents, medical students, and others in fields allied to medicine are invited to attend these sessions. There will be both scientific and technical exhibits on display.

The meeting will open on Wednesday, April 26, at 2:15 p.m., with a panel discussion on "Viral Infections of the Respiratory Tract." Among the discussants will be Dr. Robert H. Parrott, of Children's Hospital, Washington, D. C.

There will be meetings all day Thursday, from 9:30 a.m. to 5:00 p.m. The Presidential Dinner at the Sheraton-Belvedere Hotel will be held in the evening.

Dr. Allan C. Barnes, of the Johns Hopkins University, the first speaker Friday morning, will discuss "Endocrine Therapy for Gynecologic Disorders." Following his talk there will be a panel discussion on "The Public Image of Medicine." The 3-day meeting closes at noon.

A copy of the detailed program may be received by addressing the Medical and Chirurgical Faculty. 1211 Cathedral Street, Baltimore 1, Md.

The next meeting of the **Washington Psychiatric Society** is scheduled for April 28, at 8:30 p.m., in the Clinic Center of the National Institutes of Health in Bethesda, Md. The program will be presented by staff members of the Psychiatric Service.

General News

Dr. James W. Watts presided for the first time as Chairman of the **Executive Board of the Medical Society of the District of Columbia** at its regular meeting, January 23.

Dr. Jack Kleh was invited to the meeting of the Board to discuss the recommendations of the recent White House Conference on Aging, which he had attended as Chairman of the Medical Society's Committee on Aging as well as Chairman of the District Commissioners' Council on Aging. Dr. Kleh stated that an appeal had been made to the District Commissioners to seek funds from Congress to assure the organization's permanence in order to carry out certain projects which had been recommended by the Council following the Conference.

President Stubbs was authorized by the Board to appoint the committees which will be responsible for the 29th ANNUAL SCIENTIFIC ASSEMBLY. The committee chairmen are as follows:

Program: Dr. Calvin T. Klopp
Scientific Exhibit: Dr. Jed W. Pearson, Jr.
Motion Picture: Dr. Kenneth L. McCoy
Attendance: Dr. William F. Burdick
Social Affairs: Dr. George William Ware
Hobby Exhibit: Dr. Harry S. Douglas
Finance: Dr. James E. Fitzgerald

The Secretary informed the Board that due to the delay in obtaining a chairman for the Committee on Postgraduate Education, the Midwinter Seminar had to be cancelled. President Stubbs suggested that socioeconomic discussions for the benefit of the membership be substituted. He thought this exceedingly important, considering the problems which have become acute with respect to methods of paying for medical services. The Board was favorably impressed and suggested that these discussions be left to his discretion with the advice of committees of the Society of his selection.

The Board approved the appointment of Dr. Herbert S. Gates, Chairman of the Traffic Committee, and Dr. J. Spencer Dryden, President-elect of the Society, to serve as the Society's representatives on a committee investigating the qualifications of optometrists to examine the eyes of automobile drivers who have diabetes. These appointments were made at the request of Dr. Frederick C. Heath, Deputy Director of Public Health.

It was voted to make a contribution again of $100 to the Joint Board on Science Education with the understanding that it be used in underwriting Science Affairs in the Washington Metropolitan Area.

Upon the recommendation of Dr. Wallace M. Yater, Editor of the MEDICAL ANNALS, the Board appointed Colonel Conn L. Milburn, Jr., M.C., U.S.A., as Consulting Editor to the MEDICAL ANNALS, succeeding Brig. General James H. Forsee, M.C., U.S.A.

The Board voted that at the next Annual Business Meeting of the Society, Dr. Luther L. Terry, the new Surgeon General of the Public Health Service, and Rear Admiral Edward C. Kenny, newly appointed Surgeon General of the Navy, be recommended to the Society for Honorary membership, in accord with established precedent.

With the approval of the Board, Dr. Zigmond M. Lebensohn was named official representative of the Medical Society to the Seventh Annual Conference of Mental Health Representatives of State Medical Associations, which was held in Chicago, January 20 and 21, under the sponsorship of the AMA's Council on Mental Health.

The Secretary reported that Dr. Oliver C. Cox, a Life member of the Society, had sent a check to the Treasurer for $100 as a contribution in lieu of dues. The check was accepted with appreciation by the Board.

Fairfax Hospital was formally dedicated on January 14, 1961, with appropriate ceremonies. The speaker for the occasion was the Honorable Harry L. Carrico, Judge of the 16th Judicial Circuit of the Commonwealth of Virginia. Dr. John L. Parks, Dean of George Washington University

School of Medicine, spoke briefly, and Mrs. Euan G. Davis, of the Fairfax County Hospital and Health Center, gave a short history of the Hospital.

The new 300-bed Hospital was built at a cost of $6,000,000, financed half by bond issue and half by matching funds through a Federal grant. The Hospital is equipped with almost every diagnostic and treatment service offered except by the most highly specialized institutions, the latest in communications equipment, food service innovations, and attractively decorated rooms. It is located in Virginia on Gallows Road just off Arlington Boulevard, going toward Annandale, on a 38-acre wooded tract. The first patients were admitted on February 6.

Pioneering in a new trend in medical education, the Hospital is affiliated with the George Washington University School of Medicine as a teaching hospital. Dr. Clayton B. Ethridge Professor of Medicine and Director of Postgraduate Education at George Washington, gave up his private practice on February 1 in order to give full time to this post and to his new duties as Director of Medical Education and Research at the Fairfax Hospital. The Fairfax-GWU affiliation is somewhat similar to the coöperative program in practice for some years between Arlington Hospital and Georgetown University Medical Center.

Some 200 physicians have been appointed to the medical staff, of which Dr. J. D. Zylman was recently elected President. Vice President is Dr. Theodore B. McCord, and Dr. John C. Bucur is Secretary-Treasurer. Mr. Franklin P. Iams is Administrator of the hospital. Among the physicians who will serve on the staff full-time is Dr. C. Barrie Cook, an Active member of the D. C. Medical Society, who is Chairman of the Pathology Department.

On February 8, Mr. F. P. Rawlings, Jr., President of Group Hospitalization, Inc., announced that Fairfax Hospital has become a participating hospital in GHI. Fairfax makes the twenty-second hospital to participate in GHI.

A new slate of officers was elected by the Medical Staff of **Children's Hospital** at its December meeting. They are: Dr. John A. Washington, *Chairman*; Dr. C. Edwin McNamara, *Vice Chairman*; and Dr. Richard H. Todd, *Secretary-Treasurer.*

A Joint Commission for the Promotion of Voluntary Nonprofit Prepayment Health Plans was established, February 5. by the American Medical Association, the American Hospital Association, the National Association of Blue Shield Plans, and the Blue Cross Association.

Representatives of the 4 associations voted for the establishment of the Commission at a meeting to implement a resolution adopted by the AMA's House of Delegates in Washington, D. C., last December. This resolution directed the Association's Board of Trustees to meet with representatives of AHA, Blue Cross and Blue Shield in an effort to promote maximum development of the voluntary nonprofit prepayment concept to provide health care for the American people. Each organization will have 3 voting representatives on the new Commission.

Four new members were sworn in, January 10, to serve on the **Hospital Advisory Council to the District Commissioners.** They are: Dr. Paul B. Cornely, Professor and Head of the Department of Preventive Medicine and Public Health at Howard University; Dr. Sterling G. Mead, Washington dentist; Miss Josephine J. Albrecht, a staff member of the Washington Heart Association; and Mr. Slocum Kingsbury, Washington architect. Dr. Cornely is an Active member and Dr. Mead, an Associate member of the D. C. Medical Society. Miss Albrecht was formerly Executive Secretary of the Council on Rehabilitation, co-sponsored by the D. C. Medical Society, which was terminated in 1960.

Certificates for meritorious public service were presented at the ceremonies to Dr. Jesse A. Keene and Mr. Clifford Newell, retiring members of the Council. Dr. Keene is also an Active member of the D. C. Medical Society.

Dr. Seymour S. Kety, Chief of the Laboratory of Clinical Science at the National Institute of Mental Health since 1957, has been appointed to **head up the Department of Psychiatry at Johns Hopkins University School of Medicine and its Hospital.** He succeeds Dr. John C. Whitehorn, who retired on June 30.

Dr. Kety received his M.D. degree from the University of Pennsylvania in 1940. Subsequently

CALENDAR OF SPEAKERS

The following members of the Medical Society of the District of Columbia have addressed lay groups during the past several weeks. The Society maintains a Speakers Bureau, sponsored by the Committee on Public Information, through which requests for speakers for lay groups, including radio programs, can be filled.

Date	*Speaker*	*Subject or Title*	*Organization*
November 17	Dr. Christine W. Kehne	Suggestions for You and Your Child	Bryn Mawr Club of Washington
November 17	Dr. Winfred Overholser Dr. Zigmond M. Lebensohn	Mental Illness and the Law	D. C. Association for Mental Health
January 12	Dr. Julius Schreiber	Handling Some Common Emotional Problems of Family Life	Shaare Tefila Temple Sisterhood
January 13	Dr. Frances Brennecke	Progress in Handling Infant Amputees	Goodwill Guild
January 30	Dr. Richard A. Steinbach	Modern Trends in Psychiatry	Ladies Board of Georgetown University Hospital
February 2	Dr. John W. Latimer, Jr.	Diseases of the Heart	Connecticut Avenue Citizens' Association
February 3	Dr. John R. Pate	Problems of the Aging	Newcomb Club of Bethesda, Md.
February 7	Dr. Julius Schreiber	The Emotional Needs of Children	Rosemary Hills Elementary School Parent - Teachers Association
February 23	Dr. Warren C. Johnson	What Is Mental Illness?	Memorial Lecture Program, Jewish Community Center

he became a member of its faculty in the Department of Pharmacology, and in 1948 he became Professor of Clinical Physiology in the University's Graduate School of Medicine. He came to Bethesda in 1951 as Associate Director in charge of research at the National Institutes of Mental Health and Neurological Diseases and Blindness.

The American Medical Association has announced the creation of **two new departments** within its Division of Scientific Activities, headed by Dr. John B. Youmans. Effective February 1, the Department of Foods and Drugs was separated into a **Department of Drugs and a Department of Foods and Nutrition.**

Dr. William C. Spring, Jr., of Brooklyn, N. Y., who has succeeded Dr. Harold D. Kautz as Secretary of the Council on Drugs, is director of the new Department of Drugs. Dr. Spring was formerly Medical Director of the Laboratories Division of Chas. Pfizer & Co.

Philip L. White, Sc.D., who previously served as director of the combined Department of Foods and Drugs and as Secretary of the Council on Foods and Nutrition, is now Director of the Department of Foods and Nutrition.

Dr. Chevalier L. Jackson, of Philadelphia, cofounder with his father, the late Dr. Chevalier Jackson, of Temple University Hospital's famed clinic for treatment of respiratory diseases, died January 13, 1961.

Dr. Jackson was Chairman of the Department of Laryngology and Bronchoesophagology at Temple University School of Medicine and head of the Jackson Clinic, which he and his father founded in 1930. For many years his father was an Honorary member of the D. C. Medical Society.

Personals

Dr. Louis J. Goffredi is the new President of the Medical Staff of Providence Hospital. He succeeds Dr. John F. Finnegan.

Dr. Goffredi has been Chief of Surgery at Providence since 1958 and will retain this post in addition to his new duties.

He received his medical degree from George Washington University in 1938. He served as intern and resident in surgery at Providence and held a fellowship in pathology for a year at Georgetown University before beginning private practice. For the past 20 years he has taught surgery at Georgetown.

He is a Fellow of the American College of Surgeons and a diplomate of the American Board of Surgery.

Dr. Austin B. Rohrbaugh, Jr., was reëlected President of Resmor Sanitarium and Hospital Medical Staff at the annual staff meeting and dinner, January 11. Dr. Rohrbaugh is an Associate member of the D. C. Medical Society.

Dr. William M. Hart, an Active member of the Society, was elected Vice Chairman, **and Dr. Robert G. Brewer,** an Associate member of the Society, was elected Secretary-Treasurer

Resmor Sanitarium and Hospital is located on Grosvenor Lane in Bethesda, Md.

Dr. William S. Middleton, Chief Medical Director of the Veterans Administration, was honored with the establishment of an award in his name at a meeting of a group of his friends on the occasion of his birthday, January 7, 1960. The award consists of a bronze plaque. The first William S. Middleton Research Award was recently presented to Dr. Solomon A. Berson and Dr. Rosalyn S. Yalow, of the Bronx, N. Y., VA Hospital for their findings in the study of insulin during the past year which have opened vast new areas of research on diabetes and have had international impact in the medical field. The plaque will be retained at the Bronx VA Hospital until the next award is made. Dr. Middleton is an Honorary member of the D. C. Medical Society.

Dr. Ernest A. Sheppard is one of the new trustees of the Boys' Club of Greater Washington. The election took place, January 18, during the annual dinner held at the Columbia Country Club.

Dr. Lawrence J. Thomas has been reëlected national Treasurer of Phi Lambda Kappa Medical Fraternity.

Correspondence

Washington, D. C., January 9, 1961

To the Editor:

After having read the article on "Spontaneous Pneumothorax" in the December, 1960 issue of the Medical Annals of the District of Columbia, I feel that I must disagree with some of the statements and conclusions by the authors. I submit that the treatment of spontaneous pneumothorax should not be attempted without at least the consultative services of a surgeon or a phthisiologist. This is in direct disagreement with the authors, who feel that spontaneous pneumothorax can be treated by the internist or practitioner. This disagreement with the authors is purely personal, but I suspect that others share it as strongly as I.

The text of the paper, for the most part, is a straightforward discussion of the time-honored concepts of the physiology of a torn lung and the physical findings. My disagreement probably stems from the fact that I have seen the unfortunate complications which have arisen with the improperly treated spontaneous pneumothorax.

Statements in the text are made to the effect that those who treat pneumothorax must be aware of the complications so that they can be prevented. This statement is very true and should be printed in red. When spontaneous pneumothorax is not properly handled the complications are awful. In the past 12 months I have seen 4 improper (though well meant) attempts to treat "simple" pneumothorax. In each instance unnecessary complications developed, and so this letter is prompted.

The reasons given in the text for the infrequency of empyema and simplicity of inserting chest tubes may be the impetus which will lead other physicians down the flowery path of trouble.

I should like to suggest the following when presented with a pneumothorax of 20 per cent or more as an initial occurrence:

1. Aspiration of air followed by a chest film; if no expansion and/or increasing collapse, then step 2.

2. Insertion of a chest tube. This tube should be a large-bore catheter, *not* a small needle taped to the chest wall and *not* a small urethral catheter. Its site and level should be determined by the person who assumes responsibility for the management of the case. The general tendency in the untrained hand is to place the wrong-sized tube in an incorrect and nonfunctional manner into the wrong portion of pleural space. The properly placed functioning tube will usually vent enough air so as to permit relatively negative intrapleural pressures and thus reëxpand the lung. Moreover, if blood or fluid is present, a small tube is an impediment to drainage and may lead to stasis of fluid and clotting.

3. If the properly placed tube correctly connected to water-seal drainage is venting a large volume of air, and if serial films taken after insertion of the intercostal tube show no appreciable expansion even after vigorous intratracheal suction and bronchoscopy, early thoracotomy is indicated. This means 72 hours or less, not 7 days.

If the lung cannot be quickly reëxpanded, then all complications listed in the paper may develop in very rapid fashion. Therefore, it is imperative that the physician who manages pneumothorax either be supremely skilled in all auxiliary details, or request a consultation by a surgeon or medical chest specialist. It may be that his services are not required, but it is certainly better to have an early consultation so that a base line of diagnostic thinking can be arrived at rather than to have a hasty consultation when complications have developed.

On the thesis that a ruptured area of lung represents a bronchopleural fistula and that insertion of needles and tubes into the pleural cavity may further soil the pleura, antibiotics, I feel, should be used.

Respectfully,
JOHN M. KESHISHIAN, M.D., F.A.C.S.

WASHINGTON, D. C., February 10, 1961

TO THE EDITOR:

Dr. Keshishian's letter presents questions not only concerning the management of pneumothorax but also raises more important issues on the philosophy of medical practice, including the role of the "generalist" in modern-day medicine.

Because complications of myocardial infarction *may* occur, should these patients be referred to a cardiologist at the onset? Because patients with uncomplicated peptic ulcer *may* develop pyloric obstruction, hemorrhage and perforation, should the consultative service of a gastroenterologist and surgeon be sought when the patient is first seen? Because a patient with pneumonia *may* develop empyema or bacterial endocarditis, should he also be seen by a thoracic surgeon and cardiologist? The point is clear. Is the function of the general practitioner that of a classifier or dispatcher who directs patients to the specialist, or is he a physician trained in the general principles of disease—its recognition and management? Is he one who should be cognizant of potential or actual complications and the need for consultative assistance when these occasions arise? We submit, contrary to Dr. Keshishian, that the generalist, if taught the correct principles in the management of pneumothorax, is capable of treating these patients properly. If he is instructed to recognize the features leading to complications, he will know when to seek a guiding consultation and avoid a disastrous outcome. It is likely that the "four improper (though well meant) attempts to treat simple pneumothoraces" mentioned by Dr. Keshishian would have been adequately handled had the physician been versed in the "time-honored concepts of the physiology of a torn lung."

Our report, as his letter, was also prompted by seeing a large number of unnecessary complications of simple pneumothorax. However, our approach differs from Dr. Keshishian. He advises the physician to "dispatch" the patient to a surgeon or medical chest specialist. We have sought to educate. Our disagreement is one of medical philosophy.

As regards the less important issue of personal preference in the management of pneumothorax, we realize that there are many ways to digitalize a patient, many methods of using anticoagulants, and even many technics of herniorrhaphy. We respect these honest differences of opinion among physicians so long as their judgments are firmly based on sound tenets. Dr. Keshishian, however, modestly offers his way of treating pneumothorax. One is forced to wonder to whom he is directing his instructions—certainly not to the thoracic surgeon or chest specialist who, Dr. Keshishian is aware, already knows these principles. Can it be that subconsciously he, too, is trying to teach the general practitioner right from wrong?

Now, what about his way? Well, step one concerns the issue of whether or not a chest tube should be used routinely in pneumothorax over 20 to 30 per cent. He does not favor the use of a chest tube in all such patients. Who is to say he is wrong? As a matter of fact, in patients with a simple pneumothorax without open fistula the lung will spontaneously expand even without needle aspiration if one can patiently wait up to 1 or 2 months. We prefer the insertion of a chest tube because of the benefits of rapid reëxpansion mentioned in our text. To suggest without qualification that water seal drainage be used only if there is no expansion or increasing collapse following needle aspiration of air is fraught with danger. Anyone who has treated pneumothoraces is aware of the changing degree of collapse which can be brought about by a mere change in the respiratory cycle. Hence the fallacy in suggesting that the degree of reëxpansion be used as a guide to the efficacy of needle aspiration is obvious. But who is to say that ours is the only way?

We, like Dr. Keshishian, prefer a large bore catheter, but some established experts use a special S-shaped needle and some use small bore plastic tubing. We respect their choice even though it differs from ours.

Not all spontaneous pneumothoraces treated by intercostal drainage reëxpand fully in 3 days. Many factors besides the persistence of the air leak influence expansion. These include pleural vascularity, the nitrogen gradient between pleural air and blood, patency of the airway, stiffness of the lung, pleural peel, etc. All these factors must be evaluated in the decision for thoracotomy. The time limit is an arbitrary one based on this appraisal. Certainly with a wide open tear, tube drainage is often inadequate and early surgery is indicated. In our report we suggested ways of recognizing this event.

Concerning the value of antibiotics, Dr. Keshishian "feels" their routine use is indicated. We base our antipathy toward the routine use of antibiotics on controlled studies, not a "feeling" regarding their value. Spontaneous pneumothorax does not represent a bronchopleural fistula, strictly speaking, but rather an alveolopleural fistula. This is an important distinction, not a pedantic one. We found no difference in the incidence of pleural infection in patients with simple pneumothorax given prophylactic antibiotics compared to the control group. Ever mindful of hospital superinfection, we abhor the "routine" administration of antibiotics.

In sum, from the viewpoint of the actual therapy of spontaneous pneumothorax, Dr. Keshishian and we differ insignificantly. As to the role of the general practitioner in the medical world, we are widely separated by a difference in medical philosophy.

Sincerely,
SOL KATZ, M.D., F.A.C.P.
Chief, Medical Service,
Veterans Administration Hospital
DONALD MASSARO, M.D.
Medical Service, VA Hospital

WASHINGTON, D. C., February 13, 1961

TO THE EDITOR:

I was quite heartened by the comments in the article, "Spontaneous Pneumothorax," by Drs. Donald Massaro and Sol Katz in the December 1960 issue of MEDICAL ANNALS, and, specifically, their statement: "Treatment is usually simple and can be performed by the majority of physicians in the practice of general or internal medicine."

I heartily agree with the authors that if the internists are well trained by the specialists in simple procedures, it would be most helpful to the doctor, the patient, and the patient's pocketbook.

I believe that there are many procedures that the internist and the general physician could accomplish quite successfully if the specialists would teach them properly during their intern and residency years. The knowledge of complications would be just as important as the knowledge of treatment for various conditions.

I enjoyed this article very much.

Sincerely,
I. PHILLIPS FROHMAN, M.D.

Obituaries

ALVA DUCKETT DAUGHTON, M.D.

(1903–1961)

Dr. Alva D. Daughton, well known internist of Washington, died, January 2, 1961, at his home, 4614 North Thirty-third Street, Arlington, Virginia.

Dr. Daughton, the son of the late John B. and Eva Jeffers Daughton, was born in Washington, D. C., December 25, 1903. After graduating in medicine from the University of Virginia in 1929, he interned at Garfield Memorial Hospital for a year; there followed 3 years in residency training, first at Garfield and the last 2 years at the University of Virginia Hospital in Charlottesville. He continued his association with Garfield as Attending in Medicine until Garfield merged with the Washington Hospital Center, where he was a staff member.

Dr. Daughton had practiced medicine in the District of Columbia since 1933, specializing in internal medicine. His offices were at 917 Twentieth Street, N.W.

During World War II he served in Europe with the Army Medical Corps, rising to the rank of Colonel.

He was a Fellow of the American College of Physicians, a diplomate of the American Board of

Internal Medicine, a member of the American Medical Association, and an Active member of the Medical Society of the District of Columbia since 1934. He was also a member of the Cherrydale Lodge No. 42, A.F. & A.M.

Surviving him is his wife, Mrs. Vera Alice Hanson Daughton, of the home address.

EDWIN J. ROSE, M.D.

(1887–1961)

Dr. Edwin J. Rose, retired Manager of Mount Alto Veterans Hospital, died, January 4, 1961, at his home, 4501 Cortland Road, Chevy Chase, Md.

Dr. Rose was born in Cadmus, Ohio, June 9, 1887. He received his degree in medicine from the Ohio State University in 1917, and entered the Army Medical Corps, in which he served for 3 years.

After the Veterans Administration was established in 1930, he became Chief of the General Hospital Division in Washington. During World War II he was a Colonel in the Medical Corps. After the War he returned to the Veterans Administration as Acting Chief of Surgery in the Department of Medicine and Surgery.

In 1947 he was appointed Manager of the Veterans Hospital in Minneapolis, but returned to Washington 3 years later. He took over the Mount Alto post in 1953 and retired in 1957.

Surviving him are his wife, Mrs. Ruth L. Rose, of the home address, and a son, Dr. Harold D. Rose, of Milwaukee, Wisconsin.

CHARLES LEWIS SMITH, D.D.S.

(1898–1960)

Dr. Charles L. Smith, former President of the District Board of Dental Examiners, died, December 31, 1960, after a long illness at a convalescent home near Olney, Maryland.

Dr. Smith was born in Hoboken, New Jersey, March 21, 1898, to the late Charles Lewis Smith, Sr. and Annie Irene Smith. He graduated from the Georgetown University Dental School in 1918 at the age of 20, one of the youngest graduates of the School.

From 1923 to 1928 he was associated in a preceptorship with Drs. Mead, Newton and Lynch, oral surgeons, and later practiced with Dr. Newton at 1726 Eye Street, N.W. His offices were most recently at 1028 Connecticut Avenue, N.W.

His practice in the District of Columbia extended for a period of 42 years. From 1923 to 1928 he was Associate Professor in Anesthesia at Georgetown University, and from 1936 to 1937, Professor of Oral Surgery. He was elected President of the District Board of Dental Examiners in 1955.

Dr. Smith belonged to the D. C. Dental Society, the American Dental Association, the American Society of Oral Surgeons, and the Pan American Medical Society. He was a Fellow of the American College of Dentists and Past President of the Middle Atlantic Society of Oral Surgeons. He was also a member of the Columbia Country Club, the University Club, and the Washington Board of Trade. He was affiliated with the D. C. Medical Society as an Associate member from 1931 to 1937 and again from 1953 to 1959.

Surviving are his wife, Mrs. Alma Guthrie Smith, of 4201 Warren Street, N. W.; two sons, Charles Louis III, of Bethesda, Md., and Lt. Jerome A., U. S. N., of Quantico, Va; and three daughters, Mrs. Alvin B. Veirs, of Rockville, Md., and Mrs. Jane Chase Fielding and Mrs. William L. Kohler, of Bethesda, Md. A sister, Mrs. Francis N. Murray, of Springfield, Md., also survives.

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Dr. Lee Honored at Heart Luncheon

(Continued from page 178)

ton, a signer of the Declaration of Independence. Members of his family claim relationship with the Venerable Mother Seton, who founded the American branch of the Order of Sisters of Charity in 1809. He is also related through the Carroll family to John Carroll, who became the first Catholic Bishop in the United States.

Dr. Lee received his academic degree from Harvard University and his medical degree from Columbia University in 1894. Later in life, Georgetown University and Mount Saint Mary's College conferred honorary degrees upon him. After postgraduate studies in Vienna and elsewhere, he started practice in Washington in 1900, and continued until his recent retirement on account of age. He is a Life member of the D.C. Medical Society.

A highlight of the meeting was a telegram from President John F. Kennedy, extending greetings to those present and very best wishes for the Heart Campaign.

MEDICAL ANNALS
of the District of Columbia

April 1961 VOLUME XXX • NUMBER 4

HOWARD UNIVERSITY NUMBER

This is the first of a second series of special numbers of the Medical Annals, the scientific material for which is supplied by medical institutions and scientific organizations in the Washington Metropolitan Area. For the Howard University Number, the Editorial Board is indebted to Dr. W. Montague Cobb, Consulting Editor of the Medical Annals, who secured the papers which appear in this issue. Due to limited space all of the excellent papers could not be published but some of them will appear in subsequent issues during the year.

Cultural Considerations in Changing Health Attitudes*†

PAUL B. CORNELY, M.D.
Professor and Head of the Department of Preventive Medicine and Public Health, Howard University College of Medicine

STANLEY K. BIGMAN, M.A.
Research Associate in Preventive Medicine and Public Health, Howard University College of Medicine; Director, Office of Social and Environmental Research, Gallaudet College

Despite recent advances in medical knowledge and health practices in the community at large, pockets of ignorance and prescientific thinking remain.[1] There are elements of the population that are deficient in health information, reject scientific views on health and illness, and make little or no use of available health facilities and services. This pattern of health behavior reflects, of course, not some innate perversity, but rather cultural patterns that are deep-rooted and significant to those who follow them. Health education programs are aimed at changing the attitudes and behavior of such groups, but these programs, it appears, frequently meet with resistance by the groups which are their targets, if indeed the educational materials ever reach those at whom they are aimed.

The questions to which this study was addressed are these:

1. Who are the uninformed, the non-users of those services which they frequently need? How do they differ from the better informed?

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* This study was supported by a 3-year Research Grant (5357 [C1, C2]) from the National Institutes of Health, Public Health Service, Department of Health, Education, and Welfare.

† Presented before the Annual Meeting of the American Association of Public Opinion Research in Atlantic City, New Jersey, May 5–8, 1960.

2. By what means can the uninformed be reached by a health information program?

3. How can they be influenced to change their attitudes and behavior?

This is a preliminary report on highly selected aspects of the study, touching on the following topics:

1. The methods by which the study was conducted.

2. Some of the major characteristics of the families studied.

3. Opinions on staying healthy and on sources of treatment for symptoms.

4. Opinions on the importance of a physical check-up.

5. The use of the mass media for health information.

METHODS AND MATERIALS

A pilot study conducted by another member of the Department of Preventive Medicine provided the opportunity to explore possible topics for questioning and tentative forms for questions. Eventually, items were framed to cover a range of behavior, opinions, values, and kinds of information related to health, illness and medical care.

The primary area of study consists of 2 census tracts in central Northwest Washington, adjacent to Howard University. The area is close to 100 per cent Negro. Although chosen as a low-income neighborhood, it is not the poorest in the city. For purposes of comparison, white families were selected from a similar neighborhood in Southeast Washington, just east of the Capitol.

The family was the sampling unit, on the assumption that it is the focus of the culture and its values. For Negroes, a sample of 1 block in 4 within the tracts was chosen, and all included families listed. Every other family was then selected. White families were chosen from blocks suggested by social agencies and persons familiar with others in the neighborhood. It was intended that they be matched with the Negro families, as a group, on the occupational level of the family head, and on the presence or absence of children under 18.

As it turned out, the Negro and white families differed in these and other respects. This report, therefore, provides separate figures for Negroes and whites in most cases. When combined figures are reported, it is only because scrutiny of separate figures showed no differences between the racial groups.

Of 570 families selected for interview, 416 Negro and 154 white, a total of 408 were interviewed, 310 Negro and 98 white; that is, 74 per cent of the Negro and 64 per cent of the white families designated were actually included.

Data were obtained for all family members from 1 adult respondent per family. About half of the respondents were family heads. Some 70 per cent were female, either the wife of the family head or a female family head, in fairly even proportions.

Interviews were conducted from mid-April to August, 1958 (about 5 out of 6 in May and June). Some 60 per cent were made in the daytime hours before 6:00 p.m., including 53 per cent of the Negro and 83 per cent of the white cases. Three-fourths were completed on the first or second call, with a median interviewing time of a little over 2 hours.

CHARACTERISTICS OF THE FAMILIES STUDIED

Family composition. The Negro and white families were quite similar in size and composition. Counting single persons living alone as 1-man family units, the mean size of Negro families was 3.0 persons, of white families 2.8. Just over half (56 per cent) of the families of each race included no children. About 30 per cent of each included children but only 1 parent. The white families were older; 45 per cent of their heads were 45 years of age or more but only 36 per cent of the Negro heads were of that age group. The white children were much older; only 19 per cent of them, but 40 per cent of the Negro children were under 5.

Economic level. The neighborhoods chosen were described above as low-income areas. Table 1 shows the distribution by income level of the survey families and of all Washington families in 1956. Since local Negro families in general have low incomes, the economic levels of the survey and total Negro groups are similar. The white families surveyed, however, though better off than the Negroes studied, were considerably poorer than Washington white families as a whole.

TABLE 1

Level of Total Family Income, by Race: Survey Families (1958) and All Washington Families (1956)

Income Level	Race and Class of Families			
	White		Nonwhite	
	Survey %	Census* %	Survey %	Census* %
Under $2,000†	14	11	22	26
$2,000–3,999‡	38	23	47	38
$4,000 and over	48	66	31	37
Total: Per cent	100	100	100	100
Number	(98)§		(310)§	

* Source: D. C. Department of Public Health, Biostatistics and Health Education Division: Income of Families and Individuals in Washington, D. C., 1956. Washington, D. C.: Department of Public Health, 1958.

† Subsistence level for a family of 2 adults, 1 teen-age and 1 younger child, estimated by the D. C. Department of Public Welfare at $2,076 per year.

‡ Median total family income, all races, 1956, was $4,265 (see Source above).

§ Four white and 6 nonwhite families, income not reported, distributed proportionally.

The reason for the income differences, of course, is in part the unlike employment patterns of the 2 racial groups. Machine operatives, service workers, and laborers comprised two-thirds of the employed Negro family heads but only one-third of the white. This difference is of interest because the educational level of the 2 groups was similar: just half of each had not gone beyond the eighth grade.

Experience with illness. The families' awareness of illness and its significance to them was assessed through 2 approaches. Each respondent was asked to report for all adults in the family and for any time prior to the interview "any complaints of the sort that bother you off and on but hardly ever get serious."

Following the recording of any volunteered complaints, respondents were shown a list of 12 symptoms and asked which had been noticed by any adult in the family during the same period. Second, each respondent was asked to report on illnesses and accidents of a serious nature which had happened to him or to any member of his family during the period since he left his parental home. The purpose of these questions was not to furnish data for estimating the prevalence or incidence of morbidity, but rather to describe and assess the respondents' own definitions of health problems in their families, the relative importance of these problems, and kinds of treatment sought.

With respect to symptoms, the average number reported per family was 2.5 for whites and 2.4 for Negroes. The symptom about which respondents were most concerned varied with race. Negroes complained most of back and spine troubles and of pains in the joints. The whites, by contrast, were most concerned with worrying and nervousness.

A surprisingly low rate of serious illness was reported, 1.8 per family of either race. As might be expected, a slightly higher proportion of the white families claimed no serious conditions (19 per cent as against 26 per cent of the Negroes). It will be recalled that this apparent low rate is for all adult family members for all of their adult lives. It seems probable that this reflects a lack of awareness, in this relatively uneducated group, of the extent of serious illness, rather than unusual good health, since morbidity studies have shown a much higher prevalence.[2]

Prior residence. It is customary in cities like Washington to assume that the public health and welfare problems stem in large measure from the stream of in-migrants from the rural South. It was intended in this study to combine the period of residence in Washington and the place of previous residence as one of the independent variables. Unfortunately, it appears that the residents of these neighborhoods are long-time Washingtonians. About a quarter of the family heads were Washington-born, and another 40 to 45 per cent had lived in the city for 20 years or more. Less than 15 per cent of either race had arrived in the last 10 years. This, therefore, is a study of the impact of health education on long-term residents of the District of Columbia.

RESULTS

OPINIONS ON HOW TO STAY HEALTHY AND AVOID ILLNESS

What is it that makes some people healthy and others ill? This is not a new question, but it is one which continues to puzzle the laymen. It was put to survey respondents in several fashions, 2 of which are described here.

Is race related to health and illness? At one point respondents were asked: "Does a person's race affect his health?" and shortly thereafter: "Does a person's race affect his chances ot getting sick?" One may think that these are the same question; the respondents, at least some of them, did not. The percentages replying "No" to these questions were as follows: Of all respondents, 87 per cent said race does not affect health, but only 77 per cent said it does not affect the chances of getting sick. For whites the proportions were 78 per cent and 72 per cent, for Negroes 91 per cent and 80 per cent; that is, more of each group thought that race was related to illness than to good health. Why is this so? One supposition may be that "health" seems more abstract than illness. Presumably with the second question, for some respondents, it elicited the deepseated belief that Negroes have more tuberculosis, more venereal diseases, and so on. Indeed, for them race is related to illness.

However, since most respondents answered negatively, what do they think really affects one's chances of health?

Advice on staying in good health. An opportunity to express their views was afforded by an open-ended question: "If someone asked you for advice on how to stay in good health, what would you tell him?" The answers received are classified in table 2, according to "levels of prevention" distinguished by Clark and Leavell[3] in their "Preventive Medicine." The first and second levels are viewed as primary prevention—measures taken before there is illness—and are respectively general health promotion and specific protection against particular illnesses and threats to health. Secondary prevention at the outset or in the initial stage of a disease comprises level 3, early diagnosis and prompt treatment. These 3 levels are largely the responsibility of the layman. Tertiary prevention, which includes disability limitation and rehabilitation, is essentially the province of the physician.

With this explanation, what are the indications in table 2? In overall emphasis, the 2 racial groups are in agreement that the most important matters are proper diet, plentiful and regular sleep and rest, and a generally moderate and temperate pace of life. The importance of visiting a doctor periodically for a routine physical checkup was also mentioned by fair numbers, particularly among the Negroes.

At the same time there are visible racial differences. The Negroes, more often than the whites employed at less skilled manual work, and most often expressing concern over persistent joint, back and spine conditions, were more likely than the whites to advise sufficient rest and sleep (65 to 56 per cent). The whites, whose principal health preoccupation was worry and nervousness, were more likely than Negroes to caution against immoderate worrying

TABLE 2

*Response to Question: "If Someone Asked You for Advice on How to Stay in Good Health, What Would You Tell Him?" by Race and by Level of Prevention of Measure Suggested**

Suggested Measures, by Level*	Race	
	Negro %	White %
Level 1. General Health Promotion		
Personal Habits: Physical		
Food—eat proper, or sufficient, or regularly	66	79
Rest and sleep—get sufficient, or regularly	65	56
Exercise—get proper, or sufficient	11	11
Fresh air and sunshine—get sufficient	5	4
Keep clean, bathe frequently	10	8
Clothing—wear proper	4	1
Work hard	1	6
Personal Habits: Other		
Live moderately or temperately—relax, slow down, don't look for troubles, don't worry excessively, avoid "bad habits"	44	57
Lead religious life, pray, have faith	1	6
Preventive Medical Services		
See doctor:		
For regular checkup	27	10
For advice on how to stay healthy	7	1
Reason unspecified	4	†
See dentist:		
For regular checkup	1	†
Take self-prescribed medications, tonics, etc.	1	1
Level 2. Specific Protection		
Immunizations and inoculations	—	—
Other specific protective measures	—	—
Level 3. Early Diagnosis and Prompt Treatment		
See doctor at first signs of illness	1	1
Total: Per cent	‡	‡
Number	(310)	(98)

* Levels of prevention are discussed in detail by Clark and Leavell,[3] chap. 2, pp. 13-39.

† Less than 0.5%.

‡ Columns do not total 100% because of multiple response.

and tension, and to urge the need to "slow down" and "relax" (57 to 44 per cent). Proper diet was also more often referred to by whites than by Negroes. It is of interest to note the very small proportions, mostly whites, who advised hard work and prayer as a regimen conducive to health.

The greatest racial difference is in references to the importance of preventive medical services, that is, seeing a physician, whether for a physical checkup or for advice on general health measures. This kind of answer was given nearly 4 times as often by Negroes as by whites (38 to 11 per cent). Seemingly this white group—whether or not it is typical of lower-income Washington whites cannot be said—is less interested in professional medical care than the Negroes surveyed. The reasons for this difference are not clear. It may be that these Negroes, much more frequent recipients of hospital or clinic services than the whites, have come to have a stronger appreciation of the possible value of a checkup or a doctor's advice.

The most significant feature of this table, though mentioned here last, lies in the distribution of the answers among the 3 levels of prevention. For these families good health seems to be a function of "level 1," general health-promotion measures. Among these measures personal habits apparently loom larger than preventive medical services. Specific protective measures, such as immunizations, were mentioned by none, and "level 3" measures of early diagnosis and prompt treatment by nearly none.

TABLE 3

Response to Questions about Physical Checkup, by Race, Education and Number of Serious Illnesses

Characteristic	Per cent saying checkup is important, "even when you are feeling well"	Per cent saying no adults in family had had checkup when they felt well	Per cent saying that for a "really complete checkup" they would go to a		Base Number of Cases
			Hospital or Clinic	Doctor	
Negro	94	32	62	42	(310)
White	81	49	33	72	(98)
Negro: 8 or less years of school	95	34	65	41	(146)
More than 8 years	93	27	57	44	(146)
White: 8 or less years of school	84	53	36	69	(45)*
More than 8 years	75	44	25	75	(48)*
Serious illnesses:					
0, 1	91	40	50	52	(220)
2 or more	90	30	60	46	(188)

* Note the small base figures.

Health behavior is in part dependent on beliefs concerning possible alternative courses of action. This lack of saliency of 2 whole areas of preventive action assumes considerable importance in the development of programs for immunization, and in community efforts to control such illnesses as cancer, heart disease and diabetes, against which early diagnosis and prompt treatment are the major weapons.

Opinions on physical checkups and on sources of care for symptoms. This section deals with 2 situations in which people may turn to a physician, first, for routine physical examination, and, second, when confronted with symptoms, either mild or more serious, and respondent opinion concerning them.

Physical checkups. Although not many respondents mentioned a medical examination or checkup in answer to the open-ended question on how to stay healthy, the overwhelming majority agreed on their value. Asked whether such a checkup is "important even when you are feeling well," 90 per cent of all respondents said "Yes." As table 3 shows, this included 94 per cent of the Negroes, but only 81 per cent of the whites. Only slight variations in this proportion were found at different educational levels, or between those who had had much or little experience with serious illnesses.

However, this acknowledgment of the value of a checkup appears to be largely lip-service to the obvious intent of the questions asked. A large minority of respondents of either race reported that no adult family member had ever had a checkup when he was not feeling ill. The proportions of such families were higher among the whites than among Negroes, among the less educated of each race, and among those with little serious illness.

Where would they go to get a "really complete checkup"? In reply to this question almost all respondents mentioned a hospital or clinic, a private physician, or both (see table 3). Hospitals and clinics were mentioned more by Negroes than by whites, more by the less educated of each race, and more by those with 2 or more serious illnesses. The difference here is an economic one; of course, cross-tabulation of the source for a checkup with occupation, for example, showed hospitals and clinics more often mentioned by those of either race in lower-level jobs, and doctors by those better able to afford them. As for those with serious illnesses in some numbers, they had probably already had recourse to institutional facilities.

Sources of care for symptoms. Suppose, now, that the need for help has increased, that symptoms of illness are becoming manifest. Where will the respondents turn? A set of questions explored this area by asking: First, to what source the respondent would turn if he were troubled with such mild symptoms as a cough, cold or headache; second, where he would seek help if he thought his symptoms those of a serious condition; and then, in each case, what next step he would take if his initial course of action did not help. The answers are shown in table 4.

Initially, over two-thirds of each race said that they would themselves treat a cold, cough or headache, or seek the advice of a relative or friend. Most of the remainder claimed that they would consult a physician, although this seems most improbable. However, should the condition persist, nearly all of the Negroes (90 per cent) and most of the whites (83 per cent) would turn to a physician. A few Negroes (3 per cent), but more whites (12 per cent) would try self-medication as a second course. There was also a rise in the small number who would turn to druggists, clergymen and similar nonmedical sources, or who were unable to think of any alternative to their initial solution.

The situation with respect to serious illness is quite different. Over 90 per cent of each race said that for "symptoms of a condition that you suspect might become serious" they would at once seek medical care. Should this fail, 75 per cent of the Negroes and 85 per cent of the whites would stay with the medical profession, turning, perhaps, to another practitioner. Another 10 per cent of each race could not say what they would do. The proportion in each race who would turn to family or friends, or to nonmedical practitioners, or who would try to cure themselves was twice as high as for the initial response to serious symptoms.

TABLE 4

Source of Help for Symptoms of Mild and of Serious Import, Initially and as "Next Step," by Race

Type of Symptom and Source of Help	% Initially		% As a "Next Step"	
	Negro	White	Negro	White
Cold, cough or headache:				
Self, family, friends	73	67	3	12
Physician	25	30	91	83
Other sources (druggist, clergyman, etc.)	3	6	6	5
Don't know	*	2	2	6
"Symptoms of a condition that you suspect might become serious":				
Self, family, friends	4	2	6	2
Physician	92	94	75	85
Other sources	6	2	13	6
Don't know	*	2	9	10
Total: Per cent	†	†	†	†
Number	(219)	(66)	(219)	(66)

* Less than 0.5 per cent.

† Columns do not total 100 per cent because of multiple response.

A curious racial difference is apparent. More whites than Negroes would reportedly rely on nonmedical sources as a "next step" for mild symptoms. For the serious ones, however, close to 20 per cent of Negroes (but only 8 per cent of whites) would, they said, turn away from medical help. Does this mean that Negroes were less acquainted with types of special medical care available than were the whites? Or that they are less firmly attached to the use of professional doctors? The data do not offer an answer to such questions.

USE OF THE MASS MEDIA FOR HEALTH INFORMATION

Whence came these opinions on various aspects of health and medical care? In part they are the cultural heritage of the families that share them and are transmitted through the families to their members. In part, they are absorbed from the contents of the media of mass communication.

Two questions were asked about the mass media as sources of health information. Table 5 shows the replies to the first. This dealt with media in which the respondents may have noticed material on health and illness during the preceding 6 months. The second question concerned the medium which the respondent found most useful for obtaining health information (table 6). There are race differences in the proportions selecting each medium in reply to the 2 questions. A higher proportion of Negroes, for example, at each educational level mentioned hearing material on the radio.

TABLE 5

Media in Which Material on Health Was Noticed in the Past Six Months, by Years of School Completed and Race

Medium	Years of School Completed and Race			
	8 Years or Less		More than 8 Years	
	Negro %	White %	Negro %	White %
Television	35	47	47	33
Newspapers	28	29	61	46
Radio	25	13	24	10
Magazines	8	13	27	29
None of these	32	16	14	13
Not reported	8	4	3	8
Total: Per cent	*	*	*	*
Number	(146)	(45)	(146)	(48)

* Columns do not total 100 per cent because of multiple response.

TABLE 6

Media Which Were Most Helpful in Getting Health Information in the Past Six Months, by Years of School Completed and Race

Medium	Years of School Completed and Race			
	8 Years or Less		More than 8 Years	
	Negro %	White %	Negro %	White %
Television	25	20	18	13
Newspapers	19	31	37	33
Radio	10	11	4	4
Magazines	9	13	19	29
Books	5	11	8	2
None of these	30	18	19	21
Not reported	12	7	4	6
Total: Per cent	*	*	*	*
Number	(146)	(45)	(146)	(48)

* Columns do not total 100 per cent because of multiple response.

If, however, the relative ranks of the media are examined, there are only slight race differences. Turning first to table 5, it will be seen that among the better educated, newspapers are mentioned most often, TV second, magazines third, and radio fourth. Among the less educated, television and newspapers change places (becoming first and second, respectively) and radio is third, followed by magazines. That is, as would be anticipated, in each pair of media the printed one is preferred to the electronic one by the better educated, while the reverse is true among the uneducated.

According to table 6, the less educated were more likely to select the TV and newspapers as most helpful, while those with more schooling preferred newspapers and magazines.

Finally, the effect on response to the questions on health information in mass media of 2 aspects of illness experience was explored, with the results shown in table 7.

The first aspect of illness experience was the number of serious conditions previously occurring in the family. The second is whether the respondent reported having had difficulties with doctors in the past. It is clear that those with more serious illnesses were slightly less likely to report noticing no health material or finding no medium helpful. A more marked difference is observed with respect to the second item; those who recalled difficulties in their relations with physicians were much more likely to have noticed material on health and illness.

TABLE 7

Proportion of Respondents Reporting No Health Material Observed or No Medium Helpful, by Number of Serious Illnesses and by Reported Difficulties with Doctors

Illnesses or Difficulties	Reporting No Health Material Observed %	Reporting No Medium Helpful in Getting Health Information %	Base Number of Cases
Serious illnesses:			
0 or 1	25	27	(220)
2 or more	18	20	(188)
Difficulties with doctor:			
Yes	6	13	(94)
No	26	27	(314)

In short, in some fashion the patient whose relations with his doctor were unsatisfactory was also the most sensitized to media content on medical matters. Several explanations may be offered here, which will be tested subsequently:

It may be, for example, that these are hypochondriacs, who annoyed their doctors and who are inordinately concerned with anything dealing with illness.

Or it may be that having had trouble with doctors they developed an interest in health and illness that had not previously existed.

Or it may be that those who reported difficulties are afflicted with just those types of serious conditions which linger without cure. In this case they did indeed have "difficulties" of a sort which would drive them to seek all of the medical information they can find.

SUMMARY

A study was designed to determine the cultural considerations which favorably or adversely influence health attitudes and behavior. Four hundred and eight families, 310 Negro and 98 white, in low-income areas of the city were interviewed in reference to their experience with illness, the use of preventive medical services, food and nutritional patterns, utilization of health facilities, experience with maternal and infant care and patterns of informal association, and exposure to media of mass communication. This preliminary report considers these families from the point of view of their levels of awareness about serious illness, concept of race in relation to health and illness, differences as related to ways and means of maintaining health, the extent of use of the physical checkup by the apparently well, the handling of minor and serious illnesses, and their opinions of the relative usefulness of the printed word, radio and TV in obtaining health information.

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Terminal Aorta, Iliac and Femoral Arteriography[*†]

A Safe, Simplified Technic

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THE ARTERIOGRAPHIC STUDY of the terminal aorta and its branches is of continuously increasing importance in the study of the natural history, the clinical diagnosis, and the surgical management of peripheral arterial insufficiency of the pelvis and lower extremities.

Our clinical experience suggests that this condition is already a major public health problem. Thus, the technic for clinical diagnosis and study might best be simple, widely applicable, and readily available with standard clinical diagnostic facilities.

In a previous report we indicated that the thoracic and abdominal aorta, including the bifurcation, could be well visualized by passage of a catheter through a percutaneous cannula via the femoral artery.[1, 2] This procedure can be done on ambulatory patients with minimum discomfort. Of greater importance is the fact that this procedure is free of the major hazards so widely attendant and reported in translumbar aortography.[3] The serious complications from translumbar aortography have been reported as 1.02 per cent, which included a fatality rate of 0.28 per cent.[4] Renal damage and neurologic changes have been the predominant serious complications.

During the 6 years in which the retrograde technic has been used in our Cardiovascular Laboratory we have experienced none of the significant complications as reported with translumbar aortography. This has been true even though most of these retrograde arteriographic studies have been performed by rotating residents as a part of their training in internal medicine.

Detailed arteriographic study of the pelvis with this percutaneous retrograde method required an expensive cassette changer. This was necessitated by the more rapid transit of the contrast material through the large arteries as compared with the transit through the smaller arteries such as the obturator and internal pudenda. Excellent pelvic arteriography of large and small arteries is obtainable by the cassette changer technic. Figure 1 is a pelvic arteriographic study in a male aged 67 whose complaints were intermittent claudication of the right thigh and leg of 3 years' duration and partial sexual impotence.

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[†] This study was supported in part by a grant-in-aid from the National Heart Institute, National Institutes of Health, Public Health Service, United States Department of Health, Education, and Welfare.

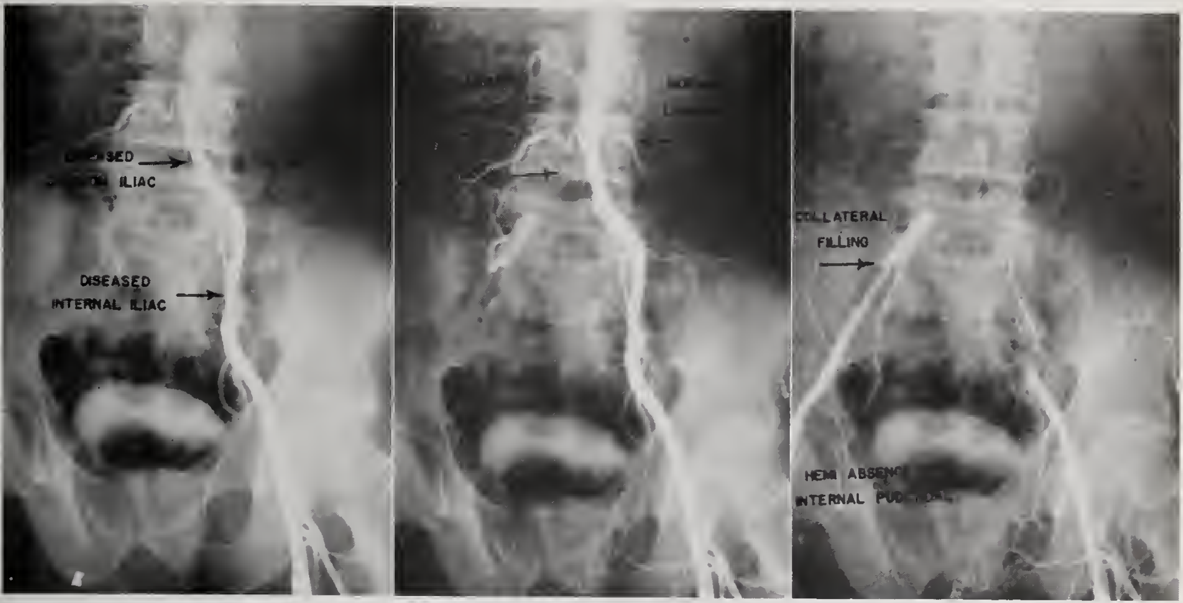

FIG. 1. Three of 6 successive exposures made with the Sanchez-Perez film changer.

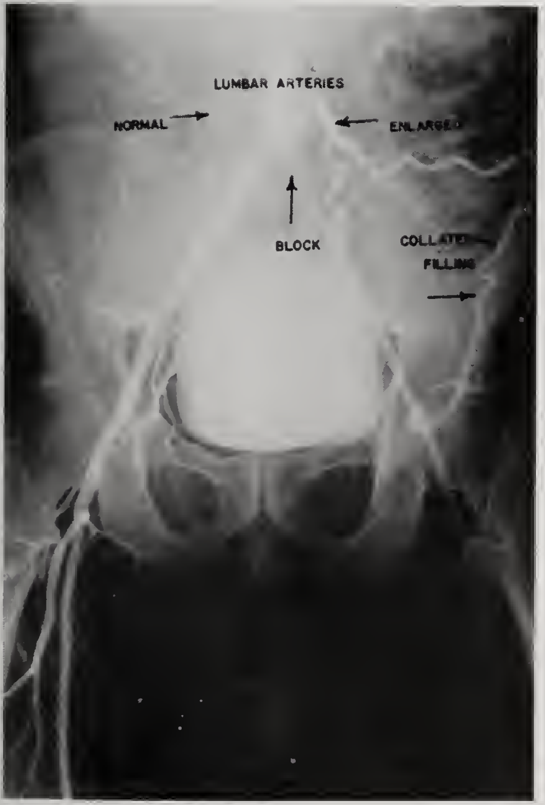

FIG. 2. Pelvic arteriogram made with the single exposure—1 injection technic.

Three of a series of 6 exposures made at the rate of 2 exposures per second for 3 seconds with the Sanchez-Perez film changer are reproduced in figure 1. The exposure made at the 1-second mark (left film) gives a graphic picture of the terminal aorta and left external iliac artery and its branches. The smaller arteries on the right side and the collateral filling on the side of the occluded right common iliac artery are best illustrated in the 2½-second exposure (right film). With the use of 20 c.c. of 76 per cent Renografin, 6 films and 6 exposures, 2 exposures per second, were required to obtain these results.

With the single injection-1 exposure technic we inject manually 40 c.c. of 76 per cent Renografin in approximately 3 seconds. A single exposure is made while the injection is in full force and while about 10 to 20 c.c. of the contrast medium remains to be injected. The exposure is made on a 14 by 17 film with a Potter-Bucky diaphragm and requires only one-sixth the roentgen dosage as with the 2 per second automatic changer. Generally speaking, the use of the Potter-Bucky diaphragm gives a better contrast in arteriography than is true with the stationary grid in the automatic cassette changer.

Figure 2 is an arteriographic study of another patient with Leriche's syndrome. This single exposure was made at the end of the injection (about 3 seconds after starting the injection). Note the adequate visualization of both large and small pelvic arteries in the single film as well as the fact that an additional 3 inches of the superficial and profunda femoris arteries are demonstrated on the single film. If more time is needed for the filling of collaterals a larger dose of contrast material can be used with corresponding delay in the time of the single exposure.

SUMMARY

Peripheral arterial insufficiency is a major public health problem. A safe, simplified arteriographic technic for the study of the terminal aorta and the pelvic arteries and their branches which permits accurate delineation of occlusive arterial disease has been described.

The method is effective and inexpensive and requires a minimum of X-ray exposure for the patients. It can be used on ambulatory patients in any small community hospital with standard X-ray equipment. In addition to simplicity, the method is free of the serious hazards of translumbar aortography. The method has been illustrated by 2 cases of Leriche's syndrome seen in a small hospital within a 2-month period.

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Clinical Arteriography in Health and Disease[*†]

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CONTRAST VISUALIZATION of the terminal aorta and the peripheral arteries has become of major importance in the management of peripheral arterial disease. Newer studies in coronary arteriography show promise of clinical importance. The clinical use of contrast vascular visualization dates back to Sicard and Forestier[1] (France, 1923) and Brooks[2] (U.S.A., 1924). The two great pioneer investigators in clinical arteriography, however, were the Portuguese surgeon, Egas Moniz[3] (1927), and his fellow countryman, the urologist, Reynaldo dos Santos[4] (1929).

Since 1929 many investigators have made numerous contributions in clinical arteriography, including the study of the cerebral, vertebral, and practically all the other major arteries of the body, and more recently the coronary arteries. A variety of technics have been employed in clinical arteriography, some complex, requiring expensive equipment, some simplified and adaptable for small hospitals with standard X-ray equipment.

VASCULAR MALFORMATIONS OF THE BRAIN

Perhaps the most practical use of contrast visualization of the cerebral arteries has been in the evaluation of patients with acute, nontraumatic subarachnoid hemorrhage in cerebral aneurysms and cerebral vascular malformations. Our limited experience with cerebral arteriography has recently been reviewed.[5] In a group of 56 patients with clinical data which indicated the need for cerebral arteriography 7 had congenital aneurysms and 5 had congenital vascular malformations of the brain, making a total of 21 per cent. One of the most common pathologic entities demonstrable in patients with spontaneous subarachnoid hemorrhage is that of congenital aneurysms of the circle of Willis. Figure 1 is an illustration of a congenital aneurysm of a branch of the middle cerebral artery. Vascular malformations and arterial displacement by space-occupying lesions are

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[†] This study was supported in part by a grant-in-aid from the National Heart Institute, National Institutes of Health, Public Health Service, Department of Health, Education, and Welfare.

usually well demonstrated by means of cerebral arteriography.

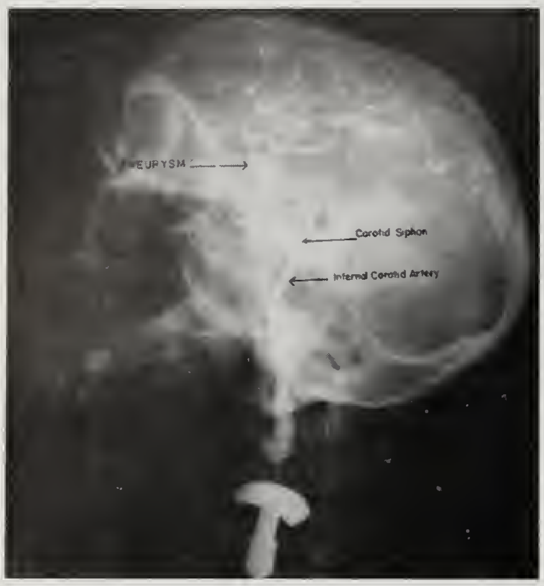

FIG. 1. Cerebral arteriogram demonstrating saccular aneurysm of branch of middle cerebral artery.

MULTIPLE ANEURYSMS OF SMALL ARTERIES (TRAUMATIC)

Figure 2 shows the diagnostic importance of arteriography in a 23-year-old housewife who at age 11 years noted recurring projectile spurting of blood from the distal subungual surface of the left fifth finger, always immediately stopped with moderate local pressure. Two years previously the patient had sustained a human bite on this finger. The arteriogram demonstrated multiple saccular aneurysms of the palmar digital arteries on the fifth finger. Note the diminished arterial supply to the ring finger.

ANEURYSM OF THE FEMORAL ARTERY

Aneurysms of the femoral artery are potentially hazardous and should be replaced by artificial graft early, even though the patient may have significant vascular disease elsewhere. Figure 3 represents an aneurysm of the femoral artery in a 53-year-old gardener. The pulsating mass in the right groin had been present for about 6 months. Three days prior to admission the man had an embolism, apparently from the aneurysm, to the posterior tibial artery, which eventually resulted in gangrene and loss of the right leg. The arteriogram gave some concept of the type of grafting necessary to preserve the arterial flow to the profunda femoris artery as well as to the superficial femoris artery. Definitive diagnosis and therapy earlier probably would have prevented the loss of the leg.

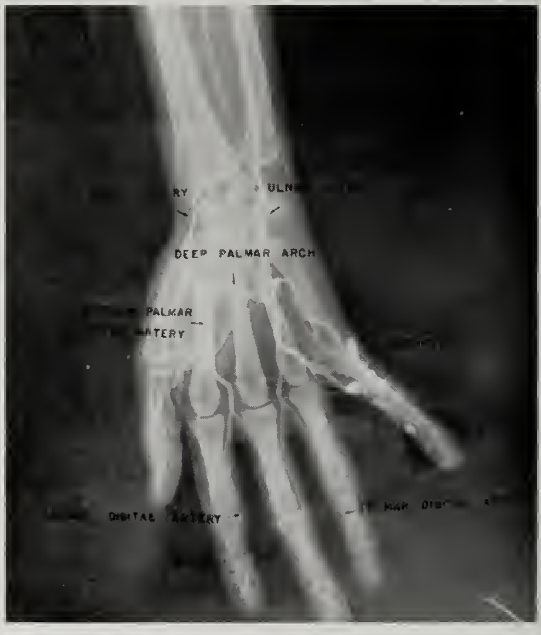

FIG. 2. Multilocular aneurysm of fifth finger and diminished blood supply to fourth finger.

ARTERIOGRAPHY AS AN AID IN THE STUDY OF ANATOMY IN THE LIVING PATIENT

The study of medicine becomes increasingly demanding on students and teachers alike, both because of the explosively increasing volume of medical data which the medical student must learn, and because of the introduction of new clinically applicable concepts for which many students and some teachers have limited background. This is especially true today in genetics, biochemistry, and endocrinology. There is little

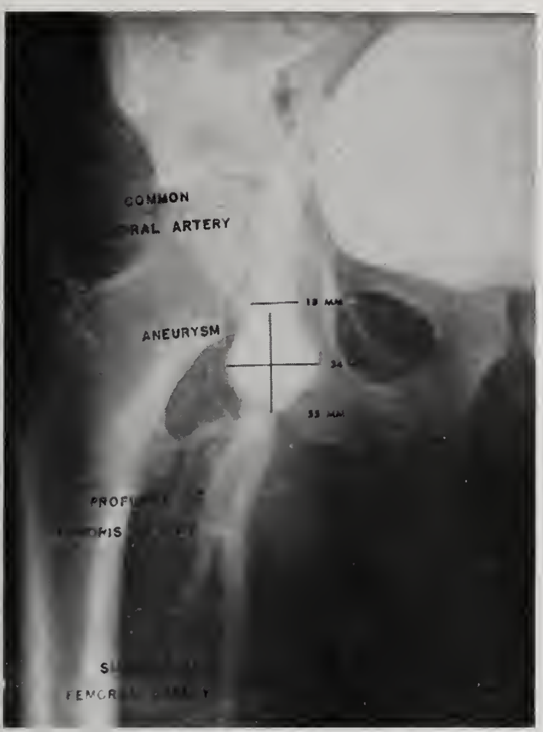

FIG. 3. Saccular aneurysm of common femoral artery.

time left in the curriculum for such important senior courses as applied anatomy.

We have made effective use of contrast cardiovascular visualization as a means of having the undergraduate medical student and the postgraduate physicians review clinical cardiovascular anatomy, both normal and pathologic. When the student has had the opportunity of studying the cerebral arteriogram of his assigned patient with a congenital aneurysm of the middle cerebral artery in comparison with the normal cerebral arteriogram it becomes easier for him to have a clear concept of the distribution of the cerebral arteries.

When the student is confronted with the arteriographic anatomy of the patient who has been assigned to him, whether it be a patient with intermittent claudication and impotence or with subarachnoid hemorrhage from a congenital aneurysm, he experiences an exciting practical challenge for the mastery of clinical arteriographic anatomy which greatly facilitates the learning experience. Thus, we utilize these arteriographic data of assigned patients in helping to reinforce the student's understanding of functional anatomy of the heart and major arteries as applied to the living patient.

Occlusive Disease of Terminal Aorta and/or Common Iliac Arteries with Claudication and Impotence

This symptom-complex commonly known as Leriche's syndrome has received considerable attention in the medical literature since 1940 when it was first reported.[6] In many cardiovascular clinics in which arteriography is not used on a wide scale this diagnosis is made infrequently.

It would appear from our experience that this syndrome is more common than was formerly suspected. During May, June, July and August of 1960 we found 4 new cases in our regular hospital and clinic admissions. Among the last 100 cases of clinically advanced arteriosclerosis obliterans studied in our laboratory by arteriography 7 were demonstrated to be classical instances of Leriche's syndrome. Figure 4 represents the arteriogram of 1 of these patients. The patient is a man, 69 years old, with a 2-year history of intermittent claudication of the calf muscles and of the feet. It is most important that the diagnosis be confirmed arteriographically, since some of these patients may be cured by the use of artificial grafts and in some instances greatly benefited by carefully planned medical therapy.

Obliterative Arterial Disease of the Legs in Diabetic and in Nondiabetic Subjects

Arteriography almost certainly will be utilized more extensively in the study of patients with diabetes mellitus. Our laboratory, in conjunction with our Diabetic Clinic, is in process of a comprehensive arteriographic survey of diabetic subjects in an effort to learn more about the natural history of arteriosclerosis obliterans in the diabetic subject.

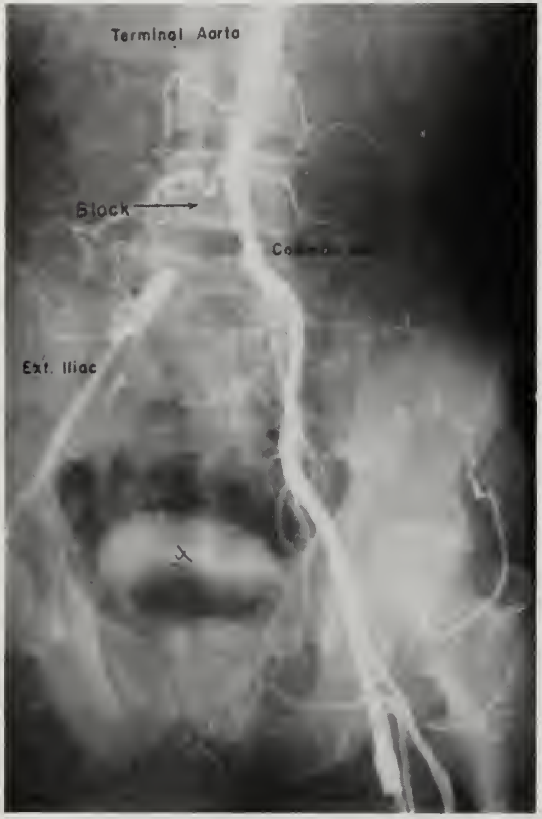

Fig. 4. Retrograde aortogram showing extensive occlusion of right common iliac artery with collateral circulation bypassing the lesion.

A recent carbohydrate tolerance test study in patients with clinical peripheral arterial insufficiency but with a negative history of diabetes was reported. This study showed that 20 per cent of these patients actually were diabetic, while a much greater per cent showed significantly abnormal glucose tolerance curves.[7] A carbohydrate tolerance test might well be performed in patients with peripheral arteriosclerosis even though there is no history of diabetes mellitus.

Some clinicians think that for practical purposes arteriography can be dispensed with in patients with chronic peripheral arterial insufficiency provided accurate attention is given to skin color, quality of the pulses, and oscillometric evaluation. Our experience indicates that the arteriogram is probably the most important single examination which can be done in patients with peripheral arterial insufficiency.

An excellent illustration is afforded by a 73-year-old woman with an indolent ulcer over the medial malleolus of the right foot of about 2 months' duration who was admitted to the Hospital for a sympathectomy. Femoral, popliteal and dorsalis pedis pulses were absent on the side of the ulcer. This finding was confirmed by oscillometry. As a part of the routine workup on this patient, a retrograde aortogram was made which showed complete occlusion of the external iliac artery and of the anterior and posterior branches of the internal iliac artery (figure 5). As a result of this finding, reconstructive surgery rather than sympathectomy proved to be the rational therapy.

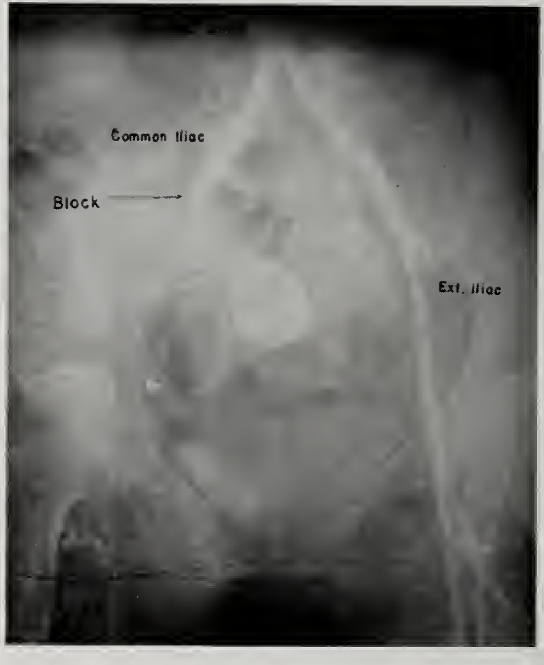

Fig. 5. Retrograde aortogram with complete occlusion of right external iliac artery and branches of internal iliac. Note calcified mass in pelvis.

COLLATERAL CIRCULATION, OBLITERATIVE ARTERIAL DISEASE, AND PROGNOSIS

The assessment of collateral blood supply is extremely important with reference to the clinical course in patients with symptomatic arterial insufficiency. The absence of the pulses and poor oscillometric indices give no accurate estimate of effective collateral blood flow. A carefully planned arteriographic study may be valuable both in terms of the possibility that intensive detailed medical therapy may preserve the extremity, or in terms of site of amputation for optimal healing. Figure 6 illustrates the effective collateral arterial circulation in a retired 70-year-old pharmacist with a 3-block intermittent claudication distance. The pulses were 1 plus or less at the popliteal level and absent below this level.

The oscillometric index showed extreme reduction at midthigh to absence in the leg just above the ankle. The arteriogram showed nonvisualization of the popliteal and anterior and posterior tibial arteries. The entire blood supply to the midthigh, leg and foot was mediated via the rich arterial collaterals instead of the natural major arterial trunks. With this knowledge of excellent arterial collaterals the patient's physician felt more secure in the institution of an intensive dietary, anticoagulant, vasodilator and progressive exercise therapy program. The patient's improvement has been such that walking 15 blocks does not produce significant pain.

DECUBITUS ULCERS OF THE BUTTOCKS AND OBLITERATIVE ARTERIAL DISEASE INCLUDING THE INTERNAL ILIAC ARTERY

The bedridden patient with peripheral arterial insufficiency not infrequently develops decubitus ulcers. This experience is extremely common in the amputee in whom the stump fails to heal. Local pressure and inadequate nursing are usually implicated. It is usually not appreciated that compromise in arterial blood supply to the sacrum and buttocks plays the major role in tissue devitalization.

Figure 7 represents the pelvic arteriogram in a 57-year-old female diabetic whose midthigh amputation stump failed to heal for several weeks. Note the paucity of arterial supply bilaterally as compared with the normal, figure 8, and the complete occlusion of the left internal iliac artery. She developed a deep decubitus ulcer over the left buttock. It seems highly probable that the arterial insufficiency may have been the critical factor in this complication.

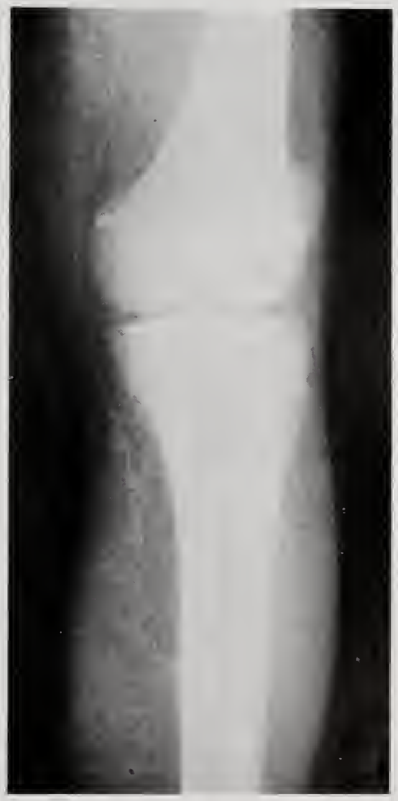

FIG. 6. Terminal collateral circulation supplying lower thigh and leg; nonvisualization of popliteal artery and its branches.

CORONARY ARTERIOGRAPHY

We have had no systematic experience with coronary arteriography. A review of current

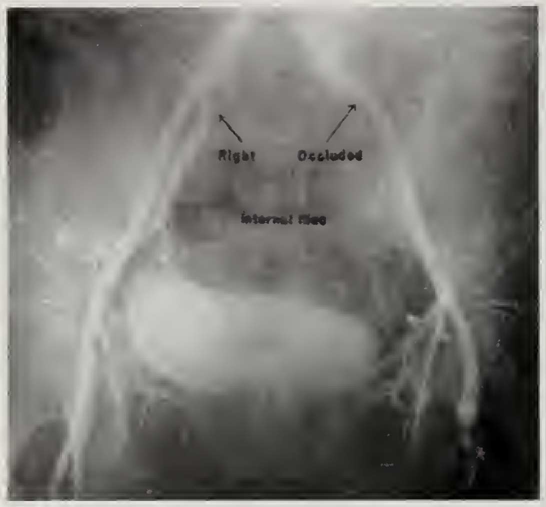

FIG. 7. Pelvic arteriogram demonstrating paucity of arterial supply and complete occlusion of left hypogastric artery.

literature on this subject, however, indicates that a variety of technical improvements are in progress in several laboratories. Thal and associates[8] have reported coronary arteriographic technics which have permitted their critical study of the coronary arteries in patients with severe coronary artery sclerosis. Dotter[9] has recently reported a method of coronary arteriography which he describes as reasonably safe and simple and gives effective coronary artery delineation and which can be done with standard arteriographic equipment. The cine-coronary-arteriogram, as developed by Sones and Shirley,[10] is sufficiently refined to permit the demonstration of intercoronary collateral channels as well as localized areas of obstruction.

New developments in this field suggest that coronary arteriography may soon become practical and clinically important in the management of selected patients with chronic coronary insufficiency.

SUMMARY

Contrast visualization of the terminal aorta and the peripheral arteries has now become a necessity in clinical diagnosis in order to provide a rational basis of therapy in patients with peripheral arterial insufficiency.

The value of arteriography in the diagnosis and management of acute cerebrovascular disease has been emphasized.

Coronary arteriography is being developed rapidly and gives promise of becoming of practical clinical importance in the diagnosis and management of selected cases of chronic coronary insufficiency.

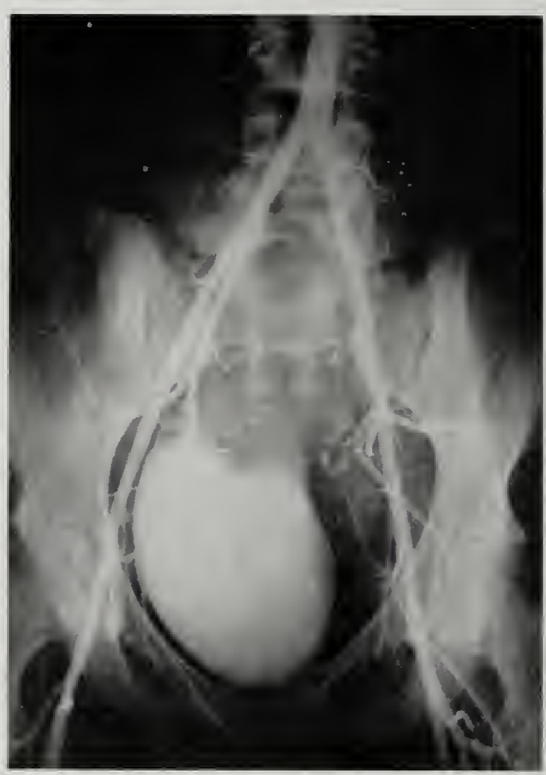

FIG. 8. Normal pelvic arteriogram.

Current arteriograms on patients under treatment and a collection of arteriograms in a wide variety of arterial disease provide an exceptional teaching stimulus for graduate and undergraduate medical students in the study of applied and functional arterial anatomy.

For all these diagnostic studies a variety of arteriographic technics are adaptable for small hospitals with standard X-ray equipment.

Seven cases of Leriche's syndrome were found in 100 cases of clinically advanced peripheral arteriosclerosis obliterans studied in our

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Acute Toxic Psychiatric Reactions Related to Amphetamine Medication*

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IN SPITE of the widespread usage of amphetamines not a great deal has been reported in the literature concerning the many undesirable reactions that occur as a result of their administration. Because of the frequency with which such cases have been observed on the Neuropsychiatric Service of Freedmen's Hospital, it was thought these phenomena should be investigated. During the past 3 years a total of 28 cases of acute toxic psychotic reactions directly related to the use of amphetamines were studied. Of this number 18 are here reported.

There were 16 females and 2 males. Twelve patients were in the 20–29-year age group and 6 in the 30–39-year age group. In 17 of the cases there was no previous history of psychiatric disorder, and in only 1 was there a previous history of mental illness. We think that these patients represent a more or less pure culture of amphetamine reactions, particularly in view of the fact that the prompt and complete response to therapy has been maintained over a period of several months with a complete absence of any residual symptoms. All of these patients had made use of these drugs for more than 4 months.

It was noted that these patients began using these drugs in the following ways:

1. Eight began to use them because they thought they were not attractive to their husbands because of their size and weight.
2. Five felt a denial of love, were depressed and ate constantly, only to find they had soon eaten themselves "out of shape."
3. Two could give no reason why they started using these drugs other than that they had been prescribed by their physicians for purposes of weight reduction.
4. Two began their usage because they thought their use stimulated intellectual functioning and would help to keep them ahead of their classes.
5. One was advised to do so because of frequent spells of depression.

The use of the drug in all these cases produced psychotic symptoms. The characteristic findings noted after long usage were evidence of depression at first and later great distrust of those around, especially to the spouse in the case of the females. Suspicion of infidelity was a common finding with definite steps outlined to terminate this imaginary affair. Talking incessantly was also noted in 12 of 18 cases. Only 6 thought they were being persecuted. The persecutory feelings when present were pronounced, and the patient thought that whatever actions were necessary had to be taken immediately. These patients were sullen, easily angered and aroused, and slept very poorly. All were found to be argumentative, combative, and aggressive. They were also quite indifferent and irresponsible in handling any problems that might occur. They considered themselves more or less perfect individuals with great projection feelings. It was largely the people around them who were at fault or were unfaithful, thus causing grief and disappointment to them. Visual hallucinations were noted in both male and female patients in 8 cases and auditory in 2. They were suspicious of persons who were close, while to unknown individuals they showed a greater friendliness. Twelve showed an elevation of blood pressure. Tachycardia was observed in 14.

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* From the Neuropsychiatric Service of Freedmen's Hospital, Washington, D.C.

In the management of these patients most important was the history, since it was impossible in most instances otherwise to evaluate their cases. In 3 cases in which an adequate history was absent, the diagnosis of schizophrenia (paranoid type) was made. As soon as the histories were secured the therapeutic procedures were quickly changed. Once the diagnosis was established the next move was the discontinuance of the drug. This was followed by daily intravenous administration of 2,000 to 2,500 c.c. of 5 per cent glucose in normal saline for about 8 to 10 days. Vitamin B_1 300 mg. intramuscularly or intravenously, and vitamin C, 300 to 500 mg. intravenously, were also administered daily. In only 1 instance was it necessary to use electroconvulsive therapy. In 2 cases 10 c.c. of 10 per cent solution of calcium gluconate was given intravenously daily for 3 days because of severe anxiety. These procedures were all followed by psychotherapy.

Three cases are reported in detail.

ILLUSTRATIVE CASES

Case 1. R. P., a 36-year-old Government worker, was admitted to the Psychiatric Service of Freedmen's Hospital in 1959. There was no familial history of mental illness or previous history of psychiatric illness, and marital, economic and social adjustments had been satisfactorily maintained through the years. She had been happily married for 12 years. There were no children. For 1½ years the patient had sporadically taken 5 mg. Dexedrine tablets to control her appetite and for a 6-week period prior to admission she had been taking 20 mg. of Dexedrine and had been drinking 8 to 10 cups of coffee daily in an effort to control her weight.

For 5 to 6 days prior to admission the patient had become increasingly tense, apprehensive, and suspicious, and on the day preceding admission to the Hospital she had begun experiencing illusions and auditory hallucinations. On admission examination revealed a somewhat stocky, neatly attired, very tense and apprehensive woman. She was frightened, withdrawn, and suspicious. There was little spontaneity, and replies to queries were for the most part completely irrelevant. Her mood was slightly depressed, and affect was blunted and inappropriate. She spoke of the people on her job who were trying to get her fired and of her husband's attempts to poison her. She spoke further of the "wiring" of her apartment and the "voices" that were calling her derogatory names. This paranoid content dominated the clinical picture. Memory, retention, recall, and calculations were unimpaired.

Physical examination did not reveal any findings of significance. The blood pressure was 138/84. Laboratory data were all within normal limits.

Conservative supportive and symptomatic management resulted in a gradual clearing of the symptoms over the first 10 hospital days. Fluids, sedation, vitamins, and phenothiazine medication (Thorazine 50 mg. q.i.d.) constituted the treatment regimen. In 2 weeks the patient was completely symptom-free, and she continued without exacerbation until her discharge on the twenty-third hospital day.

She has been followed as an outpatient for the past year and has maintained excellent adjustments in all spheres and has been completely symptom-free.

Case 2. L. C., a 37-year-old housewife, was admitted to the Psychiatric Service of Freedmen's Hospital in March, 1960. There was no previous history of mental illness and no familial history of psychiatric difficulty. She was the mother of a 5-year-old daughter and happily married. She was somewhat obese and had been dieting, and in an effort to control her appetite had taken approximately 40 to 60 mg. of Biphetamine daily over a period of a month.

The onset of the symptoms leading to admission had been relatively abrupt, and the mental status on admission revealed a neatly attired, somewhat obese, tense and suspicious person. There were no mannerisms, although she was restless and hyperactive. The speech was under slight pressure, and replies were most often rambling and incoherent. The mood shifted slightly to the euphoric side; the affect was blunted and at times inappropriate. The content was entirely delusional. The patient was preoccupied with various religious ideas, and in addition there were paranoid expressions of family and friends attempting to poison her; prior to admission there had been ideas of reference and extreme suspiciousness. No hallucinatory experiences could be elicited. There was questionable impairment of intellectual functions of memory, retention, and recall, but it was thought that these deficits were more reflections of her confusion and preoccupation than true deficits.

Physical examination did not reveal any significant findings. The blood pressure was 146/80. Laboratory data were all within normal limits.

In the treatment all efforts were made to see that the drug was discontinued in any of its form. The patient was given daily 2,500 c.c. of 5 per cent glucose with normal saline in which was placed about 500 mg. of vitamin B for about 10 days. Sedation of 40 grains of chloral hydrate at bedtime was given only when necessary. Thorazine, 50 mg. q.i.d. for 4 days, was also given, as the patient appeared restless during the day.

The patient was discharged after the twelfth hospital day with complete remission of the symptoms.

Follow-up over a 4-month period has revealed no residual of her acute psychotic episode.

Case 3. P. S., a 37-year-old housewife, believed her husband was becoming interested in other women. She believed the implication was for her to reduce her weight. She read a book given to her by an insurance company and concluded that she was about 30 pounds overweight. She was about 63 inches tall and weighed 155 pounds.

The patient was placed on Dexedrine, 5 mg. b.i.d., for 2 weeks by her physician, during which time no appreciable loss of weight was noticed, but she was more alert and slept less. The dose was increased to 10 mg. b.i.d. before meals. After 8 weeks the patient had lost 20 pounds but now was unable to hold her job and requested sick leave. At this time she became suspicious and thought at times that her husband was trying to annoy her by moving things from where she had left them. She thought conversations on the phone by her husband were concerned with dating other women. This led her to leave home to live with her sister.

By this time the patient was using 5 mg. of Dexedrine 3 times daily. She soon felt that her sister was bringing men into the home for immoral purposes to her and left and went to her father's home. There she accused the stepmother of telling the neighbors she was crazy, that men were after her, and that she was "man-crazy." The father, after she spent a few weeks there, got in touch with the husband, who instituted hospitalization. When seen she thought her husband was guilty of bigamy, that the nurses were on the side of her husband since he talked to them rather freely, and that her husband had given to his new wife all of her clothing.

The patient was placed on 2,500 c.c. of 5 per cent glucose in saline, 300 mg. of vitamin B intramuscularly daily, and 30 grains of chloral hydrate at bedtime. The Dexedrine was discontinued at once in the Hospital. About the twelfth day most of the delusions had disappeared, psychotherapy was instituted, and by the end of 3 weeks the patient was discharged as completely well.

COMMENT

Clinically, the amphetamines have been used for the last 30 years. They find their primary use as psychic stimulants or mood-ameliorating drugs. In addition, they may be indicated as analeptics in barbiturate intoxications. They perhaps find even broader indications in general medicine to control the appetite in reducing regimens, to counteract fatigue, and to promote prolonged wakefulness or special alertness for short periods.[1]

Although there is a host of proprietary preparations on the market, basically the principal preparations of this series fall into 1 of 3 categories: (1) dextro-amphetamine sulfate or Dexedrine, (2) its racemic form, d-1-amphetamine sulfate or Benzedrine, and (3) d-desoxyephedrine hydrochloride or Methamphetamine. Little or nothing is mentioned of the toxic psychotic reactions in relation to the administration of these drugs, however.

The dangers of the use of Benzedrine preparations have been observed over a period of 20 years. Young and Scoville[2] were first to report in 1938 the danger of the excessive use of Benzedrine preparation. Their 2 patients suffered from narcolepsy, for which they were being treated by Benzedrine preparations. They soon, however, developed more serious illness, in that acute paranoid reaction resulted with delusions of reference and auditory hallucinations. The full significance of this reaction, however, was not fully realized by these authors.

It was reported in 1947 by Monroe and Dull[3] that the development of acute paranoid hallucinatory state resulted in 4 prisoners who used Benzedrine Sulfate and became serious disciplinary problems thereafter. Confusion, assaultiveness, hallucinations, delirium, and panic states were observed by Brown[4] in his studies. Norman and Shea[5] reported a case of acute hallucinosis as a complication of addiction of the use of amphetamine sulfate. Paranoid features were definitely characteristic.

Beamish and Kiloh[6] reported 7 cases in which psychotic illnesses occurred in association with amphetamine consumption. In 4 cases the diagnosis was clearly that of schizophrenia with a definite paranoid coloring, features which were similar to those we have observed. Herman and Nagler[7] reported 8 patients with psychiatric reaction attributed to Benzedrine, with the typical reaction being paranoid with auditory and visual hallucinations in a setting of agitation and excitement, such as was seen in only 2 of our cases.

The use of amphetamines in the case of children has been shown to have immediate affects. Fletcher[8] reported the case of a child swallowing 4 tablets used by her mother for reducing and who within half an hour became active and silly and within 2½ hours showed clonic jerks of all her extremities and short spells of delirium.

Otaki[9] reported the case of a patient diagnosed first as an acute schizophrenic episode but which was subsequently changed to acute organic confusion, in which the paranoid element common to these psychoses was predominant. This condition has also been noted by Askevold.[10]

We are forced to conclude from these observations and from our studies that regardless of the disorders for which these drugs are taken, there is always the ever-present danger, if they are used persistently and consistently, of the patient developing a psychotic disorder of characteristic nature as herein described.

SUMMARY

A group of 18 cases of acute psychotic reactions has been presented. The drugs that were related to all of these cases were of the amphetamine series. The characteristic symptoms were of a paranoid nature. Discontinuance of the use of the drug and the administration of fluids and vitamins caused complete amelioration of the psychotic symptoms.

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Evaluation of Chloraderm as a Dermatologic Agent

A Study of Bacteriologic, Fungicidal and Antipruritic Properties

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Most patients with dermatologic diseases seek the advice of a physician because of varying degrees of pruritus and/or the presence of fungous or bacterial infections. A preparation which would relieve the pruritus and at the same time reduce the activity of bacteria or fungi would be a welcomed addition to our armamentarium.

The present clinical evaluation of Chloraderm Ointment and Liquid has shown it to possess anesthetic as well as bactericidal and fungicidal properties.

Chemistry

The action of this preparation is derived from phenolic salts. Its formula includes sodium phenolate, phenol (less than 2 per cent), menthol, thymol, sodium tetraborate, glycerin and chlorophyll. The action of the phenols has been the subject of extensive studies since 1867, when Lister used it as a germicide. Pulvertaft and Lumb[1] in 1948 showed the effect of antiseptics upon the lysis of bacterial cultures. With phenol they found there was activation of the lytic cell enzyme in low concentrations, which caused the eventual death of the bacterial cell. Gale and Taylor[2] in 1947 studied the effects of antibacterial agents upon the leakage of amino acids from the bacterial cell. With *Streptococcus faecalis* as the test organism it was found that a 1 per cent solution of phenol caused a leak of glutamic acid almost as intensive as that produced by boiling. From this and other findings it was concluded that the bactericidal action of phenol depends upon its rendering the cell wall permeable to certain cell constituents. This is in agreement with Maurice,[3] who in 1952 observed that the presence of phenols promotes the penetration of basic dyes through the cell wall of *E. coli*. Haydon[4] in 1956 confirmed that phenol causes leakage of essential metabolites from the bacterial cell.

Roberts and Rahn[5] in 1946 found that phenol in concentration of 1.2 per cent caused dehydrogenase and oxidase to cease functioning.

Bacteriologic Studies

Because of the marked success with this formulation in the treatment of various pharyngeal infections[6] in which it was proved to be effective as an anesthetic, fungicide and bactericide, we decided to pursue clinical studies with Chloraderm on dermatologic conditions in which pruritus and infection from various organisms were present.

In vitro studies[7, 8, 9] with Chloraderm were done on 9 microörganisms with the A.O.A.C. (Association of Official Agricultural Chemists) phenol coefficient method with negative results up to 30 seconds. The microörganisms were *Staphylococcus aureus*, *Streptococcus hemolyticus*, *Monilia albicans*, *Pseudomonas aeruginosa*, *Aerobacter aerogenes*, *Trichophyton menta*, *Microsporum canis*, *Microsporum audouini*, and *Trichophyton rubrum*.

TABLE 1

Results of Treatment with Chloraderm for Various Skin Lesions

Diagnosis	No. of Patients	Excellent	Very Good	Good	Fair	Poor
Contact dermatitis	8	5	1		2	
Seborrheic dermatitis	9	5		4		
Eczematoid dermatitis	4	1	2			1
Tinea pedis (athlete's foot)	8	6	2			
Tinea cruris and tinea circinata	3	2	1			
Atopic dermatitis	3					3
Burns	4		3			1
Pyodermia and ecthyma	4	1	1	1		1
Abrasions	1	1				
Tinea versicolor	2					2
Furunculosis and infected ulcers	2	1		1		
Dry pruritic dermatitis	1	1				
Infected sebaceous cyst	1	1				
Total	50	24	10	6	2	8

CLINICAL STUDY

Fifty patients from the outpatient Dermatologic Clinic of Freedmen's Hospital with various dermatologic conditions, usually complicated by superimposed bacterial or fungous infections, were treated with either the liquid or ointment form of Chloraderm. The medicament was applied locally 2 or 3 times daily. The results are given in table 1.

Of the 50 patients with dermatologic disorders treated with Chloraderm Liquid or Ointment 42 patients (84 per cent) were improved, while 8 (16 per cent) showed no improvement. Chloraderm Ointment was most effective in patients with tinea pedis (athlete's foot), contact dermatitis, and seborrheic dermatitis.

In all of the cases treated the clinical diagnosis was confirmed by culture studies. These studies revealed that staphylococci and/or streptococci were present in practically all patients with primary bacterial infection. Subsequent cultures, made as treatments progressed, showed decreasing growth of the organisms and, in many instances, no growth. The decrease in the fungi growth was evident as the clinical symptoms receded or cleared completely.

In no case was there any evidence of a sensitizing effect by the topical application of Chloraderm Ointment or Liquid. Patch-testing was done with double strength Chloraderm on normal patients, and no sensitization was observed.

SUMMARY

Chloraderm in ointment or liquid form was used in the treatment of 50 patients with various types of fungous and bacterial infections.

No local toxic or sensitizing reactions were

(*Continued on page 253*)

Cushing's Syndrome

Report of Four Cases with Renal Biopsy in Three

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THE DIAGNOSIS of Cushing's syndrome has become more frequent in recent years because of the familiarity of physicians with the cortisone-induced disease and improved methods for measuring steroid hormones in urine and blood. In the past 2½ years 4 patients with this syndrome have been found in the hospital population at Freedmen's. This presentation is designed to stress certain diagnostic features, special therapeutic difficulties, and the results of renal biopsy in this disease.

REPORT OF CASES

Case 1. H. T. (164-035), a 28-year-old woman, was referred to the Endocrine Clinic in March, 1958 by the Genitourinary Clinic, where she was being treated for recurrent pyelonephritis. She was pregnant and was taking thyroid extract for hypothyroidism as prescribed by another clinic in this city. Her diagnosis of hypothyroidism had been made on the basis of weight gain, somnolence, easy fatigability and 1 low BMR. She was continued on thyroid extract but aborted at 6 months. Following abortion she was taken off thyroid extract. A PBI of 4.8 mcg. and a I^{131} uptake of 20.8 per cent on July 22, 1958 indicated that the patient was euthyroid. Approximately 4 months following abortion she was seen again in the Endocrine Clinic. She had developed increased weight, a round face, purple striae of the abdomen, axillae, thighs and legs, easy bruisability, a painful buffalo hump, increased hirsutism of the face and body, menstrual irregularity, and a psychoneurotic personality. In September, 1958 she was admitted to the ward.

Physical examination showed an obese, round-faced, well-developed woman in no acute distress. Her weight was 168 lbs., the blood pressure 140/85, the pulse rate 80, the respiratory rate 20, and the temperature 98.6°F. Examination of the ears, nose and throat was negative. Funduscopic examination was normal. The thyroid was not enlarged. The breasts were pendulous with prominent venous patterns. The heart and lungs were normal. The abdomen was soft and obese. The liver, spleen and kidneys were not palpable. There were external hemorrhoids. Gynecologic examination was normal. The skin was wet, dusky and covered with numerous pigmented striae, especially over the abdomen, legs, thighs and axillae. Neurologic examination was negative.

The blood hemoglobin was 15.70 Gm. per 100 ml., the hematocrit was 43 per cent and the white blood cell count was 11,350. The urine had a specific gravity of 1.015 and was negative for sugar, acetone and albumin, and the sediment contained many epithelial cells, a few pus cells and a few bacteria per high-power field. The fasting blood sugar was 96 mg. per 100 ml. and the blood nonprotein nitrogen 28. The serum sodium was 143 mEq., potassium 4.8 mEq., chloride 106 mEq., bicarbonate 23.6 mEq., and calcium 5.3 mEq. per 100 ml. A glucose tolerance test was normal. A serum flocculation test for syphilis was negative. A 24-hour urine for 17-OH corticoids contained 14.8 mg. (October 3, 1958) (normal 2–10 mg.). Two 24-hour urines for 17-ketosteroids contained 18.7 mg. (October 4, 1958) and 24.38 mg. (October 6, 1958) (normal 10–25 mg.). Presacral insufflation and bilateral nephrotomograms showed normal-sized adrenals. An intravenous pyelogram was within normal limits.

The patient had a 2-stage adrenalectomy. In the first stage, October 9, 1958, nine-tenths of the right adrenal was removed, and a right renal biopsy was done at the same time. Two weeks later, October 23, 1958, the entire left adrenal was removed. The patient was discharged from the hospital on 10 mg. of hydrocortisone and 25 mg. D.C.T.M.A. (desoxycorticosterone trimethyl acetate) daily.

Four and a half months later the patient had a return of obesity, buffalo hump, easy bruisability, pigmented striae, and psychoneurotic manifestations. She received pituitary radiation, a total of 4,600 r, from June 9, 1959 to July 13, 1959. She received an additional 2,850 r from July 14, 1959 to July 24, 1959. On August 11, 1959 her 17-OH corticoids were 14.3 mg. At operation, on January 7, 1960 the right adrenal fragment was found to be larger than was the entire gland at the first operation. This fragment was removed.

The patient was subsequently maintained on 37.5 mg. of cortisone daily plus 0.1 mg. of 9 F.F. (9-alpha fluorohydrocortisone). She became pregnant in September, 1960. In view of her history of recurrent pyelonephritis which flared up with each pregnancy and her adrenalectomized state she was subjected to therapeutic abortion and tubal ligation on November 29, 1960. Her course was uneventful.

Case 2. D. P. (159-247), a 42-year-old woman, was admitted on October 30, 1959 to the surgical service because of a laceration of her right leg. Because she also had severe diabetes mellitus it was thought that management of her laceration could best be carried out in the hospital. Eight years prior to this admission she was discovered to have diabetes. Three years earlier she had been hospitalized for cellulitis of her right leg, severe hypertension, obesity and uncontrolled diabetes. After 6 weeks of hospitalization she was discharged on 80 units of NPH insulin and a reducing diet. In 1957 this patient was hospitalized for uncontrolled diabetes, severe hypertension, obesity and azotemia. During this hospitalization she had violent and severe emotional outbursts which necessitated her transfer to the psychiatric service. While there she received electroshock therapy. Following improvement she was discharged on a regimen of 60 units of NPH insulin and 10 units of regular insulin daily, diet, tranquilizers and hypotensive drugs.

There was no family history of diabetes or hypertension. The blood pressure was 200/110, the pulse rate 80, the respiratory rate 20, the temperature 98.6°F, and the weight 203 lbs. The patient was an obese, ruddy-faced woman in no apparent distress. Ears, nose and throat were negative. Funduscopic examination showed the presence of capillary aneurysms bilaterally. The thyroid was not enlarged. The breasts were negative. The lungs were normal. The heart was somewhat enlarged. The abdomen was soft and extremely obese with nonpigmented striae over the lateral aspects. The liver, kidneys and spleen were not palpated. Dilated superficial veins were present in both lower extremities. Neurologic examination was normal. A 4-inch laceration was present on the outer side of the right leg and was surrounded by large ecchymotic areas. Gynecologic examination was negative.

The hemoglobin was 14.1 Gm., the hematocrit 42 per cent, and white blood cell count 12,350. The urine had a specific gravity of 1.012, with a trace of albumin and 4 plus sugar. The blood urea nitrogen was 12 and the glucose 101 mg. per 100 ml. The chloride was 97 mEq., the bicarbonate 32 mEq., the sodium 137 mEq., the potassium 3.7 mEq. and the calcium 4.4 mEq. per 100 ml. The total protein was 6.95 Gm., the albumin 4.81 Gm., and the globulin 2.14 Gm. per 100 ml. The serum flocculation test for syphilis was negative. A 12- and a 24-hour urine determination showed the presence of 43 mg. and 81 mg. per 24 hours of 17-OH corticoids and 27.69 mg. and 40.0 mg. per 24 hours of 17-ketosteroids. Presacral insufflation and nephrotomography showed the presence of a round mass, 2 inches in diameter, in the region of the right suprarenal gland (figure 1). X-ray films of the chest showed the presence of cardiomegaly and minimal pul-

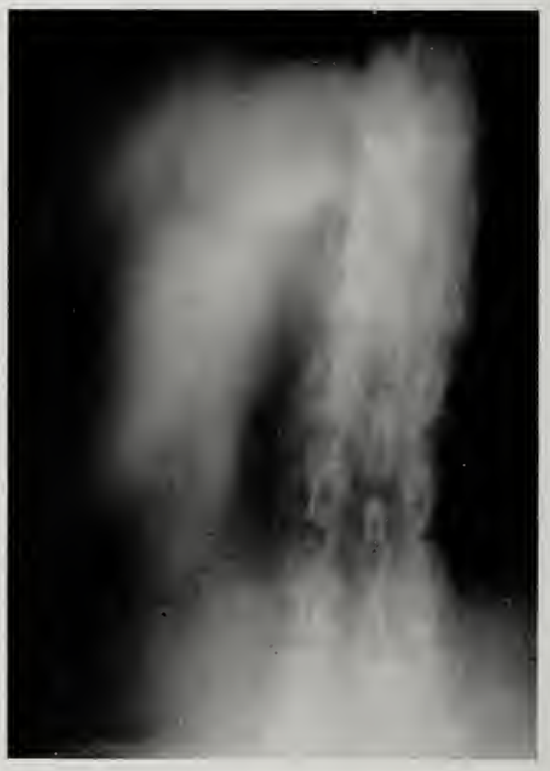

FIG. 1. Nephrotomogram showing right adrenal mass.

monary vascular congestion. X-ray films of the pelvis revealed partially healed fractures.

On December 8, 1959 a right adrenalectomy was performed. The gland was the site of a tumor measuring 7.0 cm. in diameter. A right renal biopsy was done at the same time. Microscopic examination showed the tumor to be an adenoma.

Following surgery the patient had several episodes of adrenal insufficiency and was finally discharged on a maintenance dose of 20 mg. of hydrocortisone daily. Attempts to withdraw corticoid support have resulted in symptoms and signs of adrenal insufficiency. The patient can be maintained on ACTH but is currently receiving hydrocortisone in small doses.

Case 3. P. M. (74-915), a 24-year-old woman, was first seen in the Medical Clinic on September 4, 1959. She was referred by her private physician because of inability to become pregnant after 5 years of marriage. Menarche occurred at age 16, 4 years before her marriage. In 1955 she noticed a decrease in duration and volume of her menses, and when first seen by us she had been amenorrheic for at least 1 year. Four years previously she developed excessive growth of hair on her face, arms and legs. Her physician had noted a progressive rise in her blood pressure during the previous 3 years, as well as a gain in weight of 87 lbs. Six months prior to admission, nocturia, excessive thirst, polyphagia and low back pain had developed.

Physical examination showed an obese, hirsute, moon-faced female. Examination of the ears, nose and throat was negative. Funduscopic examination was normal. The thyroid gland was not enlarged. The breasts were normal but extremely flabby. The lungs were normal. The heart was not enlarged, and no murmurs were present. The abdomen was soft and obese. Nonpigmented striae covered the lateral aspects of both sides of the abdomen, and there was a male distribution of the pubic hair. The liver, spleen and kidneys were not palpable. There was no costovertebral tenderness. The clitoris was hypertrophied. The uterus was normal in size, and the ovaries were not palpated. The arms and legs were covered with a heavy growth of hair. Neurologic examination was normal.

The temperature was 98.6°F, the pulse rate 90, and the respiratory rate 20. The blood pressure was 158/110, and the weight was 232 lbs.

Examination of the blood revealed a hemoglobin of 13.15 Gm. per 100 ml., a hematocrit of 43, and a white blood cell count of 8,850 with 57 per cent neutrophils, 40 per cent lymphocytes, 2 per cent monocytes, and 1 per cent eosinophils. The specific gravity of the urine was 1.017 with an acid reaction, a negative test for albumin, a trace of acetone and a 4 plus test for sugar. The urinary sediment contained 2 to 3 white blood cells, 0 to 2 red blood cells, and a few epithelial cells per high-power field. The blood urea nitrogen was 10 mg., and the fasting blood sugar 218 mg. per 100 ml. The sodium was 137, the potassium 4.8, the chloride 109, the serum calcium 3.8, and the bicarbonate 26 mEq. per liter. The total protein was 6.8 Gm., the albumin 4.5 Gm., and the globulin 2.3 Gm., with an A-G ratio of 1.95.

The electrocardiogram showed nonspecific T-wave changes in L_3 but was otherwise normal. X-ray films of the spine, chest and skull were normal. Presacral insufflation and nephrotomography did not show evidence of adrenal tumor or enlargement. An intravenous pyelogram was normal. Two consecutive 24-hour urines showed a 17-OH corticoid level of 21.6 mg. and 14.19 mg. per 24 hours, and a 17-ketosteroid level of 12.08 mg. and 9.5 mg. per 24 hours. Four days after admission, suppression with triamcinolone (supplied as Kenacort by Squibb) was attempted with 12 mg. daily. After 4 days of triamcinolone administration the 17-OH corticoid level was 27.5 mg. and the 17-ketosteroid level was 8.1 mg. per 24 hours.

Initial therapy consisted only of tolbutamide (supplied as Orinase by Upjohn), 500 mg. daily, which was increased to 1 Gm. daily. On October 9, 1959 the patient had a right total adrenalectomy, at which time a right renal biopsy was also done. Postoperative course was uncomplicated. Two days following operation tolbutamide therapy was resumed, but hyperglycemia and glycosuria persisted. On October 29, 1959 a left total adrenalectomy was performed. The postoperative course was again very uneventful. The patient was placed on 40 mg. of hydrocortisone daily, and tolbutamide was not reinstituted. The fasting blood sugar levels returned to normal, and glycosuria disappeared. There was a noticeable decrease in growth of hair on the arms and legs, but the facial hair remained as before. Two weeks after the last stage of her operation the patient was discharged from the hospital. Since then she has been followed in the Endocrine Clinic. There has been no return of menstruation, except for spotting for 2 days on 2 different occasions.

One month after discharge from the hospital the patient developed furunculosis, which eventually responded, after some difficulty, to antibiotic therapy. She was admitted to the hospital on November 27, 1960 for culdoscopy. This study revealed bilaterally atrophic ovaries.

Case 4. R. M. (183-447), a 14-year-old girl, was admitted to the medical service on December 1, 1959 with a chief complaint of persistent frontal headaches, becoming worse at night. The patient was apparently well until a month prior to admission. She was seen by her private physician, who noted that her blood pressure was elevated, that the patient was obese and had cardiomegaly, hirsutism, and a trace of sugar in the urine.

This patient had been overweight since 12 years of age, at which time she noted also the appearance of facial hair. There had been no excessive thirst, polyuria or polyphagia. There was no family history of hypertension or diabetes. The patient had her last menses approximately 6 weeks prior to admission.

Physical examination showed an obese, markedly hirsute young female. The ears, nose and throat were normal. Examination of the fundus showed no abnormalities. The thyroid was not palpated. The breasts were well developed and showed some pigmentation about the nipples. The lungs were normal. The abdomen was soft and obese. There was no enlargement of the liver, kidneys or spleen. The clitoris was of normal size, and the ovaries were not palpated. There were no striae, pigmented or nonpigmented. There was a heavy growth of hair on the face, arms and legs. The pubic hair pattern was female, and there was abundant axillary hair. The neurologic examination was normal.

The blood pressure was 170/110, the pulse rate 110, the respiratory rate 18, and the temperature 98.6°F.

The urine had a specific gravity of 1.027 and gave a negative reaction for sugar; it contained a trace of albumin, and the sediment contained a few epithelial cells. Examination of the blood revealed a hemoglobin of 13.45 Gm. per 100 ml., a hematocrit of 43 per cent and a white blood cell count of 7,500, with 75 per cent neutrophils, 14 per cent large lymphocytes, 9 per cent monocytes, 1 per cent eosinophils, and 1 per cent basophils. The platelets were normal. The flocculation test for syphilis was negative. The sedimentation rate was 25. The blood urea nitrogen was 11 mg. and the fasting blood sugar 202 mg. per 100 ml. The blood sodium was 130, potassium 4.2, chloride 103, and bicarbonate 23 mEq. per 100 ml. The total protein was 7.54 Gm. per 100 ml., with 4.93 Gm. of albumin and 2.31 Gm. of globulin and an A-G ratio of 1.89. Two fasting blood sugars revealed levels of 202 mg. and 184 mg. per 100 ml. respectively, without glycosuria.

Posterior-anterior X-ray films of the chest showed cardiomegaly with minimal pulmonary vascular congestion. X-ray films of the skull showed no abnormalities. Presacral insufflation and nephrotomography revealed normal retroperitoneal structures. An intravenous pyelogram was within normal limits. An electrocardiogram showed evidence of left ventricular hypertrophy.

Several 24-hour urines for 17-OH corticoids showed: 16.76 mg. (November 25, 1959), 15.0 mg. (December 3, 1959), and 15.3 mg. (December 4, 1959) per 24 hours; 17-ketosteroid values were 4.5 mg. (November 25, 1959), 418 mg. (December 3, 1959), and 5.9 mg. (December 4, 1959) per 24 hours; gonadotrophins were within normal limits. Dexamethasone (supplied as Deronil by Schering), 3 mg. daily, was given for 3 days with resultant depression of 24-hour secretion of 17-OH corticoids to 8.5 mg. and of 17-ketosteroids to 3.4 mg.

Shortly after admission, glycosuria of severe degree began to appear. This has been controlled by diet, reduction in weight, and the use of tolbutamide (supplied as Orinase by Upjohn), and the hypertension has been controlled by diet alone with reduction in weight. The patient was discharged on December 23, 1960 to the Endocrine Clinic. She is being considered for pituitary irradiation.

DIAGNOSTIC FEATURES

Patient H. T. (case 1) was pregnant at the time of her initial visit and had been placed on thyroid extract by a clinic in this city where study had revealed a low BMR. She aborted shortly after entering our clinic services. Subsequent study confirmed the low BMR but revealed a normal PBI and I^{131} uptake. The hypometabolic state found in some patients with Cushing's syndrome has been referred to as corticogenic hypothyroidism and is characterized by a low BMR in the presence of a normal PBI and I^{131} uptake.

This same patient exhibited obvious water retention with puffy face and swelling of the hands, feet and abdomen which could not be explained on the basis of cardiac, renal or hepatic disease. Edema was a feature of her disease prior to her first operation and was an early indication of recurrence of disease after subtotal adrenalectomy. Water retention was characteristic of patients D. P. (case 2) and R. M. (case 4) also.

Profuse sweating has been emphasized recently by Hurxthal[1] as a symptom of Cushing's syndrome. Patient H. T. (case 1) complained bitterly of this symptom both during the initial episode and during recurrence of the disease after subtotal adrenalectomy.

Failure of a simple laceration to heal was the cause for reinvestigation of patient D. P. (case

2). This patient, however, had aroused suspicion a year before definitive diagnosis because of the presence of insulin-resistant diabetes and psychiatric disturbances.

Psychiatric disturbances were evident in patients H. T. (case 1) and D. P. (case 2). In patient D. P. removal of an adrenal tumor was followed by immediate improvement of her emotional and mental state. In H. T., however, psychiatric problems have persisted, manifested by 2 attempts at suicide and the appearance of mucous colitis.

Osteoporosis is a well-known symptom of Cushing's syndrome and is responsible for the backache of which many of these patients complain. As a cause of asymptomatic fracture of the pelvis, however, it is not well known. X-ray films of the pelvis of patient D. P. (case 2) revealed several extensive fractures of which she was unaware.

Amenorrhea was noted in 4 patients, hypertension in 3, diabetes in 3, hirsutism in 3, and striae in 2. These are common signs of Cushing's syndrome and need no amplification.

The most significant laboratory studies in our hands were the 24-hour urinary excretion of 17-OH corticoids, nephrotomograms, and presacral gas insufflation. A tendency to erythremia and abnormal handling of glucose were also reliable laboratory features of the disease.

Therapeutic Problems

The patient with Cushing's syndrome secondary to bilateral hyperplasia of the adrenal presents a special problem in therapy. Treatment may be pituitary irradiation, subtotal adrenalectomy, total adrenalectomy, or combinations thereof. Pituitary irradiation is the least reliable and will result in at least 60 per cent recurrences.[2, 3, 4] Subtotal adrenalectomy plus irradiation will result in 30 to 40 per cent recurrences. Total adrenalectomy is curative but leaves the patient dependent on steroid substitution therapy for life with attendant problems during childbearing, infections, trauma, and surgery. At these critical times the physician must remember to adjust the dose of corticoids to avoid precipitation of adrenal insufficiency. In many instances patients feel well on 20 to 25 mg. of cortisone or hydrocortisone, but a dose of 37.5 to 40 mg. daily in divided doses is a closer approximation of physiologic needs. A dose of 25 mg. cortisone in the a.m. and 12.5 mg. in the p.m. is very satisfactory. When postural hypotension is a problem, 9 F.F. in doses of 0.05 mg. to 0.1 mg. daily is corrective. D.C.T.M.A. in doses of 25 to 75 mg. monthly may be used instead of 9 F.F. but has the disadvantage of requiring injection.

Rapid recurrence of disease or rapidly increasing pigmentation after subtotal adrenalectomy is suggestive of the presence of a pituitary tumor.[5, 6]

Theoretically the easiest therapeutic problem is presented by the patient with an adrenal tumor. In such instances proper therapy is removal of the tumor. Following such surgery, however, the patient's pituitary may fail to stimulate the remaining adrenal so that the patient may require substitution therapy for a year or more. This is the situation in D.P. (case 2), whose remaining adrenal is inactive 14 months after surgery. This problem has been discussed by Kyle, Meyer and Canary,[7] who suggested failure of pituitary release of ACTH as the cause of the difficulty.

A similar problem is that of failure of release of gonadotrophins. Patient P. M. (case 3) has failed to menstruate following correction of her adrenal disease. Her studies reveal negative urinary gonadotrophins, low estrogen effects on vaginal smears, and atrophic ovaries on culdoscopic examination. Whether this is a phenomenon of continued inhibition of gonadotrophin release conditioned by previously long-maintained high levels of hydrocortisone or is an indication of an underlying pituitary tumor, only further study and observation will reveal. Since it is well known that loss of gonadotrophin secretion may be the earliest objective evidence of pituitary tumor, this finding cannot be taken lightly.

A special problem is presented by the 14-year-old patient, R. M. (case 4), whose mother has limited intelligence and low income. In such a situation bilateral adrenalectomy is fraught with danger. The preferred course in this case is to treat with radiation of the pituitary, and, if this does not effect remission, to follow up with subtotal adrenalectomy.

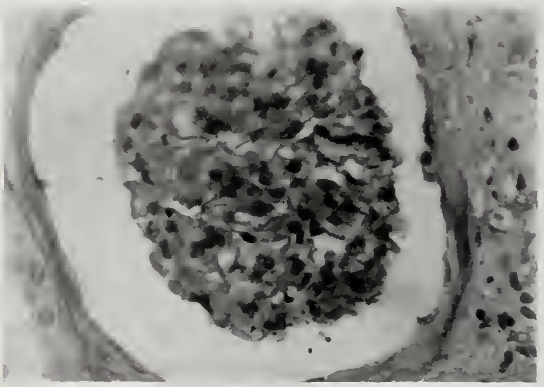

FIG. 2. Photomicrograph of kidney showing thickening of basement membranes of glomerulus and Bowman's capsule (case 1).

In H. T. (case 1) and D. P. (case 2) severe muscle pains in the legs and arms were complained of following surgery. In both instances the leg pains suggested thrombophlebitis to several observers. These pains require only symptomatic therapy and are suggestive of a cortisone withdrawal syndrome.[8] They disappear during the first postoperative month.

KIDNEY BIOPSY

The renal lesion of Cushing's syndrome is poorly characterized. It is known that renal lithiasis is common in this disease, that calcinosis may occur, and that pyelonephritis is a common complication.[9] It is important, however, to determine if there is a specific renal lesion of Cushing's syndrome. This is of interest not only as an additional diagnostic tool in Cushing's disease, but also for its implications regarding the specific renal lesion of diabetes. The glomerulosclerotic lesion of diabetes has been attributed by various observers to overactivity of the adrenal cortex.[10] The 2 cases of Cushing's syndrome with biopsy reported by Kark[11] presented a lesion quite different from that of Kimmelstiel and Wilson.[12] We have performed 3 open biopsy examinations of the kidney in Cushing's syndrome, and the lesions are not at all suggestive of the Kimmelstiel-Wilson lesion but are quite consistent with the lesion described by Kark. We believe these findings are strong evidence against an adrenal cause of the specific renal lesion of diabetes mellitus.

In case 1 (H. T.) sections of the kidney, stained by hemotoxylin and eosin, showed occasional hyalinized glomeruli. There were no alterations noted in the remainder of the glomeruli. The arterioles, tubules and interstitial tissue showed no abnormal changes. The kidney, stained by PAS, showed slight thickening of the glomerular capillary basement membranes and Bowman's capsule. This change is present in nearly all of the glomeruli (figure 2).

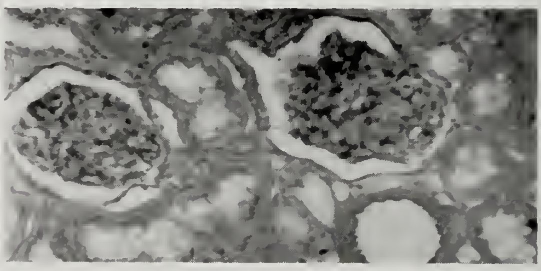

FIG. 3. Photomicrograph of kidney showing thickening of basement membranes of glomeruli and Bowman's capsule (case 2).

In case 2 (D. P.) the kidney, stained by H and E, showed no significant changes in the glomeruli, tubules, arterioles and interstitial tissue. The kidney, stained by PAS, showed slight thickening of the basement membranes of the glomeruli and thickening of Bowman's capsule (figure 3).

In case 3 (P. M.) sections of the kidney, stained by H and E, showed dilatation of Bow-

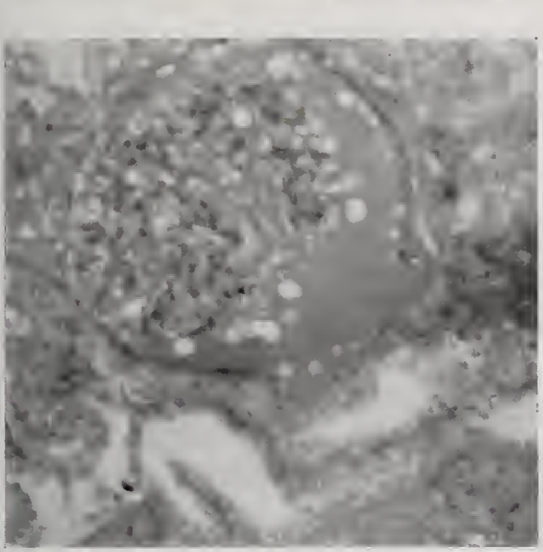

FIG. 4. Photomicrograph of kidney showing thickening of basement membranes of glomerulus and Bowman's capsule. Note proteinaceous substance in Bowman's space (case 3).

man's spaces by an eosinophilic proteinaceous substance. The glomerular loops were somewhat compressed. The tubules, arterioles and interstitial tissue showed no abnormal changes. The kidney, stained by PAS, showed slight thickening of the basement membranes of the glomeruli and thickening of Bowman's capsule (figure 4).

In summary, the kidneys in all cases showed thickening of the basement membranes of the glomeruli and thickening of Bowman's capsule.

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Hereditary Ectodermal Dysplasia

Report of the Anhidrotic Type in Two Negro Children*

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FOR MANY YEARS dermatologists have been familiar with a congenital defect of ectodermal origin characterized by an absence or diminution of sweat glands, anodontia or hypodontia, hypotrichosis, and defects in other ectodermal structures. Though the disease has been known by various names, Weech[1] in 1929 introduced the now more widely accepted term of hereditary ectodermal dysplasia of the anhidrotic type. The anhidrotic type is characterized by defective sweating, sparseness of hair, and abnormal dentition, occurs more frequently in males, and appears to be transmitted recessively by the females.[2, 3] In the more common form, the hidrotic type, there is dystrophy of the hair and nails with occurrence in and transmission by both sexes.

Despite a wide racial and geographic distribution of case reports,[4] very few publications have cited the occurrence of the disease in the Negro.[5–8]

REPORT OF CASES

Case 1. Mark M., a 3-month-old Negro boy, was admitted on June 5, 1956 because of coughing and gagging and occasional vomiting after feeding, which had been present since birth. The patient weighed 6 lbs. 8 oz. at birth, following an uneventful prenatal course and delivery. However, the mother was known to have inactive tuberculosis. Two days prior to admission the coughing and gagging became worse and accompanied all oral intake. There were 4 siblings, 1 male and 3 females. The mother and oldest sister have irregularly spaced peg-shaped teeth and congenital absence of some teeth. The brother, aged 4 years, has congenital ectodermal dysplasia which was diagnosed 3 years earlier at another hospital.[8, 9] The patient's maternal great-great-grandfather was said to be of Caucasian origin.

On admission the infant appeared greatly malnourished and chronically dehydrated. The weight was 7 pounds and 4 ounces. The temperature was 97°F. The fontanelles were palpable but not depressed. Scanty, fine, silky hair was present on the scalp; mucus was present in the nasal passages. The lips were everted and the tongue and oral mucous membranes were dry. The gums were edentulous. There was very little subcutaneous fat on the extremities, and the palms and soles were pale. The skin was dry, and a maculopapular rash was present. Generalized lymphadenopathy was noted. The cry was hoarse in character.

The hemoglobin was 10.7 Gm., with a hematocrit of 27 per cent. The white blood cells numbered 7,000, with a normal differential. Urinalysis and blood chemistry determinations were normal.

An X-ray film of the chest was essentially normal, and an esophagram ruled out a tracheo-esophageal fistula and filling defect such as may be caused by a double aortic arch. A recumbent film of the abdomen revealed a large amount of air throughout the gastrointestinal tract which was interpreted to be secondary to aerophagia. Roentgenograms of the maxilla and mandible (figure 1) showed in the postero-anterior exposure of the right and left

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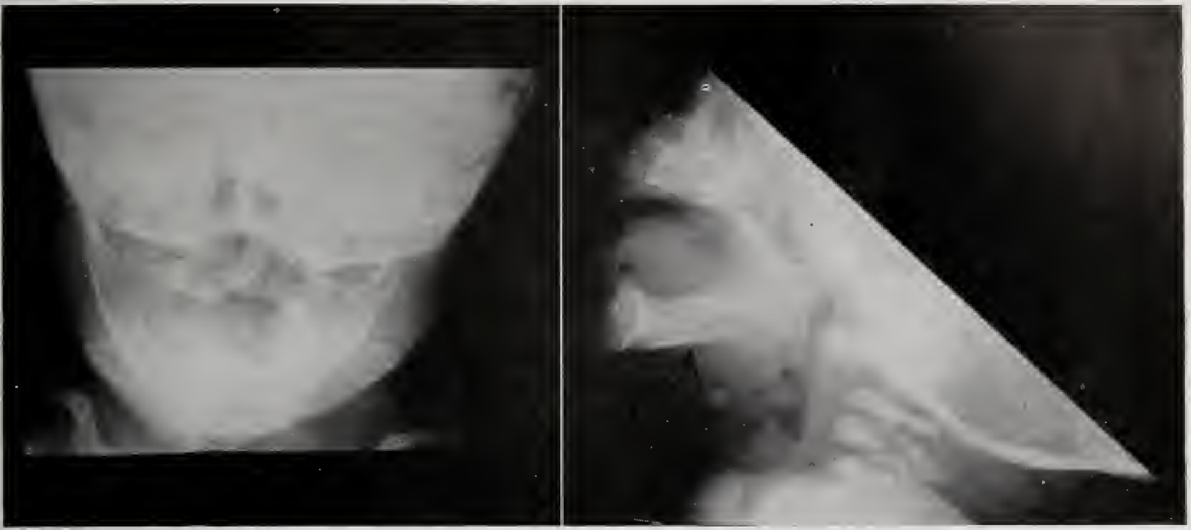

FIG. 1. Case 1. Roentgenograms of jaws at 3 months of age: left, PA view of jaws showing no evidence of tooth formation; right, lateral view of jaws with similar findings except for discrete radiopacity.

bodies of the mandible no evidence of tooth formation, with the stage of dental development consistent with that of a 4- to 6-month fetus. In the direct lateral view of the jaws the findings were essentially the same, but there were discrete radiopacities in the maxillary molar regions which were suggestive of calcification of the cusps of the deciduous molar teeth; these findings were consistent with those observed in a 5- to 6-month fetus.

Dental roentgenograms were repeated at 8 months of age. In the lateral oblique view of the mandible and posterior maxilla a radiopacity was noted in the anterior aspect of the mandible suggesting the possibility of some calcification of the crown of a deciduous incisor. A circumscribed radiolucency was noted in the posterior aspect of the mandible which could represent a dental crypt without tooth formation. In the maxilla there were 3 rather definite tooth development sites which could be identified as the first and second deciduous molars and probably the deciduous canine or cuspid. The stage of dental development was approximately that of the fifth or sixth fetal month.

For about 18 hours after admission intravenous fluids were administered, after which boiled water was given orally. During the first oral feeding the patient coughed severely and subsequent attempts to feed him were unsuccessful. Therefore, a Levin tube was passed into the stomach, through which a hypoallergic formula was given. Frequent coughing continued with some regurgitation of the formula. Direct laryngoscopy revealed that, contrary to the usual state, the cricopharyngeus muscle was quite relaxed on insertion of the laryngoscope into the posterior pharynx. The examination otherwise was negative.

About a week after admission the patient developed a fever ranging between 101° and 105°F, which persisted for 5 days. Infectious causes were ruled out through physical findings and cultures. This episode occurred during the summer when the environmental temperature was very warm. Figure 2 represents the temperature of the patient as compared with the temperature of the environment at a comparable hour as reported by the Weather Bureau, Washington, D. C. from June 13 to June 22, 1956.

Two weeks after admission the formula was changed to a more concentrated mixture and an antispasmodic was prescribed before feedings. During the next week the patient gained 14½ oz. Gavage feedings were maintained for a total of 20 days. Strained fruits, vegetables and meats were gradually added to the diet; the appetite became good.

A sweat test was performed on the patient and a control subject with Minor's solution (iodine, 4 Gm.; castor oil, 20 c.c.; absolute alcohol, 180 c.c.) and corn starch. The temperature of the patient was 100.4°F and that of the control 99°F prior to the test. Both infants were painted with the solution on the forehead, chest and axilla, and these areas were sprinkled with corn starch. The source of heat was a 75-watt light bulb placed 12 inches above the chest of each patient. Almost immediately blue specks* were noted on all areas of the control. No discoloration was noted on the patient after 15 minutes; then a few blue specks were noted on the right forehead and later in the left inguinal area and left axilla and after 30 minutes in the right axilla. The test was discontinued after 40 minutes. No blue specks were noted on the chest. The patient's temperature 1 hour after the onset of the test was 102°F and in 140 minutes 103.2°F.

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* Blue discoloration on skin due to iodine-starch reaction which takes place only in the presence of moisture.

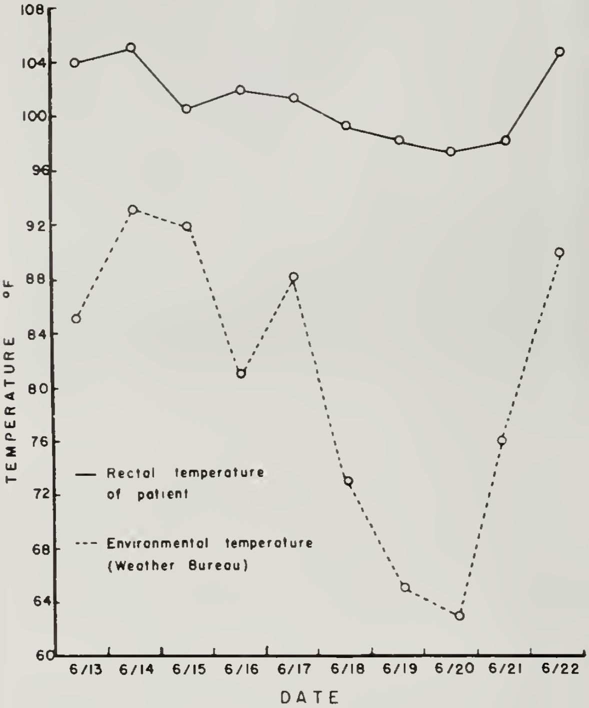


FIG. 2. Case 1. Temperature of the patient as compared with environmental temperature at the same hours.

Skin biopsies from the right axilla and the interscapular area were made. A photomicrograph of 1 of the specimens revealed an absence of eccrine (sweat) glands. Sebaceous glands could be seen. Breaks in the corium are also noted (figure 3).

While the child was hospitalized, lichenified lesions were observed on the arms and legs with weeping lesions in the intertriginous areas of the neck. Fairly good response was obtained from topical application of tar medication on the lichenified areas. The only other treatments received were antibiotics during the initial febrile period and a transfusion of 80 c.c. of whole blood.

The patient was discharged on August 23, 1956, weighing 12 lbs., 12½ oz., having gained 5 lbs., 8½ oz. in 2½ months. He was next seen on November 20, 1956 at 8 months of age. The gingivae were not well developed. The child was edentulous. The scalp hair was fine, thin and sparse (figure 4). Tearing was noted. Lichenification was present on the extensor and flexor surfaces of the elbows and knees (figure 5). The weight was 12 lbs., 8¾ oz. There was an upper respiratory infection present and the temperature was 102°F.

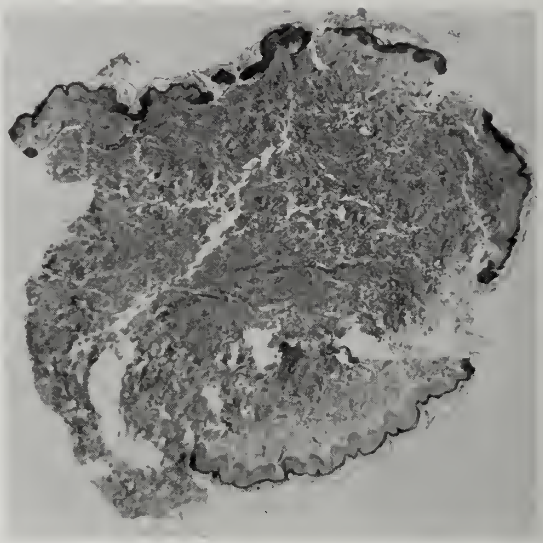


FIG. 3. Case 1. Absence of eccrine glands although sebaceous glands can be seen.

At 14 months of age the child was still endentulous. There were occasional coughing episodes and exacerbations of skin lesions. He was walking with support and speaking in monosyllables.

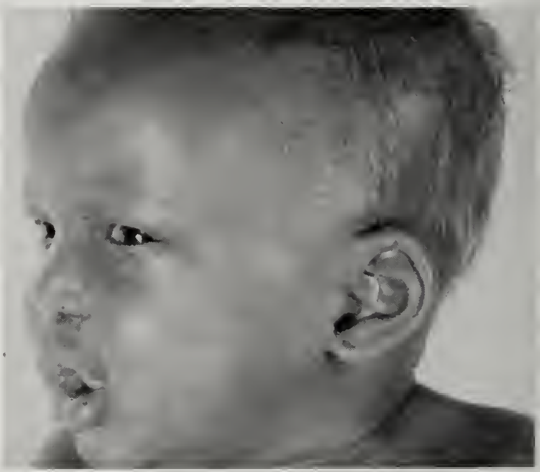


FIG. 4. Case 1. Dry skin, fine silky hair, and eversion of lips.

Case 2. Michael M., the 5-month-old male sibling of Mark M. (case 1), was well until a week prior to admission, at which time he developed an acute upper respiratory infection characterized by coughing and nasal congestion. Home remedies offered some improvement in his condition until January 10, 1958, when he developed a croupy cough associated with respiratory difficulty. His condition worsened during that day, and when respirations became very rapid and labored he was brought to the hospital and admitted. The mother's pregnancy was complicated by toxemia; however, the delivery was without complication, and the infant weighed over 7 pounds at birth.

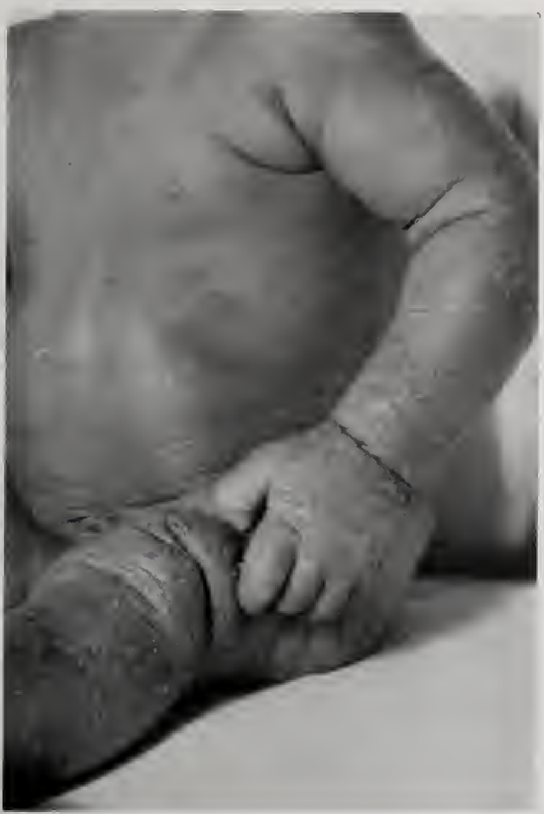


FIG. 5. Case 1. Lichenified lesions on trunk and extremities.

Examination revealed a well-developed, well-nourished 5-month-old infant in severe respiratory distress, with a croupy cough and loud irregular respirations. He weighed 15 lbs., 5¼ oz., his temperature was 103.4°F, and his respiratory rate 70 per minute. There was a hoarse cry. The skin was hot and dry, but tissue turgor was good. The tympanic membranes were markedly injected. The nares were congested with exudate, and the nasal mucosa was hyperemic. Subcostal and some suprasternal retraction was present. Harsh breath sounds were heard throughout both lung fields. A supernumerary nipple was present on the right side.

The hemoglobin was 9.36 Gm. with a hematocrit of 30 per cent. The white blood cells numbered 9,700. The sedimentation rate was 22 mm. per hour. Urinalysis was normal. Cultures from the nose revealed beta streptococci, *H. Staphylococcus aureus*, mannitol negative, and Neisseria species. Throat cultures revealed nonhemolytic streptococcus, Neisseria species, and *H. Staphylococcus aureus*, mannitol negative. There was no growth in the blood cultures.

The patient was immediately placed in a tent and oxygen with Alevaire administered. Procaine penicillin, 600,000 units, and streptomycin, 0.25 Gm., were given stat., with penicillin ordered daily. The morning following admission the temperature was 100°F and respirations were not as labored. The patient generally had improved. Later that day, however, the temperature rose to 107.6°F (figure 6). Antipyretic measures were instituted, and intravenous fluids containing chloramphenicol, 100 mg. every 6 hours, were given. Procaine penicillin was discontinued. Tetracycline, 75 mg. every 6 hours, was instituted. The temperature, however, became elevated again the evening of the third day. Liquids were taken well by mouth. Early on the fourth day of hospitalization the temperature rose to 106°F. Before antipyretic measures could be instituted the patient vomited and stopped breathing. Resuscitation measures failed to revive the patient.

Necropsy revealed a well-developed and well-nourished male infant, weighing 6,575 Gm. and measuring 68 cm. in crown to heel length. The hair was black, thin, sparse and confined to the scalp area. Teeth were absent. The chest was somewhat barrel-shaped, and the abdomen was moderately protuberant. The lungs were approximately twice the expected weight, edematous and congested. The liver, spleen and kidneys were congested. Mesenteric lymph nodes were enlarged, discrete and pale.

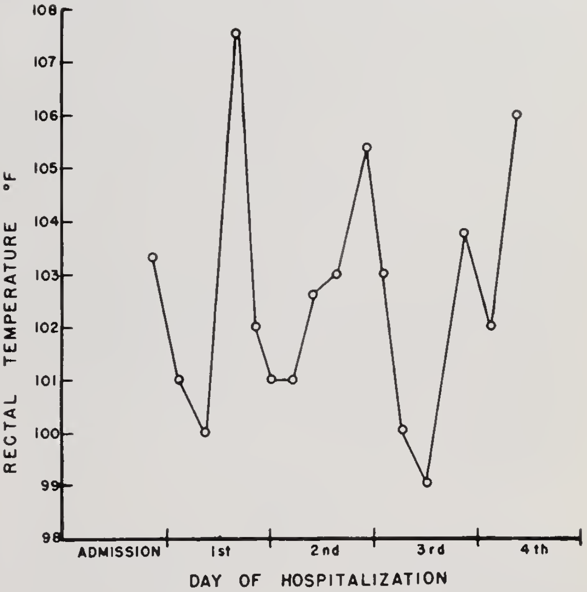


FIG. 6. Case 2. Temperature of patient while hospitalized.

Microscopic sections of skin from the anterior thorax and abdomen were thin and had a delicate layer of keratohyalin. There were heavy deposits of melanin pigment in the basal layer of the epidermis. Pilosebaceous and sweat-gland structures were absent (figure 7). The dermal vessels and collagen were not remarkable. Adipose tissue of the fetal type persisted in the subcutaneum. Skin from the axillae was generally similar to that from the thorax and abdomen. However, pilosebaceous and immature sweat glands of the apocrine type were present in the axillae (figure 8). The sweat glands were primarily contained in the subcutaneous adipose tissue immediately beneath and occasionally within the dermis. The immature apocrine sweat gland acini were lined by plump epithelial cells with vesicular nuclei and abundant pale cytoplasm often containing small eosinophilic granules. Interposed between the epithelial cells and resting in the basement membrane of the acini were numerous myoepithelial cells. Sweat glands of the eccrine type were not present.

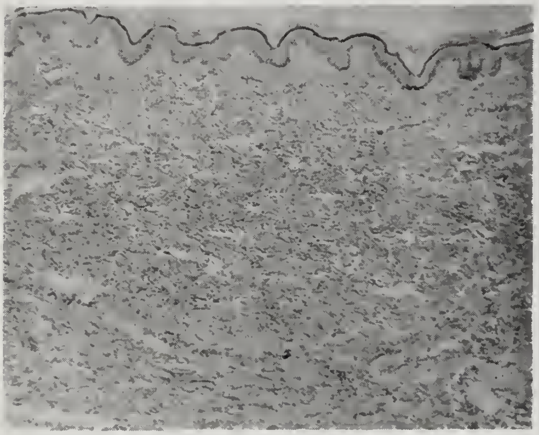


FIG. 7. Case 2. Epidermis of abdomen showing complete absence of skin appendages; on microscopic examination of entire cross section no skin appendages of sweat gland type were present.

Other microscopic findings included an ectopic nest of thymic tissue in the parenchyma of the thyroid, evidence of chronic bronchitis and tracheitis, prominent zona fasciculata of the adrenals with moderately well vacuolated component cells, and extramedullary hematopoiesis of the liver and spleen.

DISCUSSION

The causes of this disease are not fully known. The finding of cases within families in several generations has pointed to a possible hereditary factor. In some families the defects have appeared solely in males and have been transmitted by females. In other families defects have appeared in both sexes. There have been cases in which a congenital factor has been suggested, such as a disease suffered by the mother before the sixth week of gestation affecting the teeth or later producing other changes.

The clinical characteristics which have been described are as follows[10-14]:

The facies suggests congenital syphilis, in that the bridge of the nose tends to be flattened. The brow is high and wide with protuberant frontal bosses and brows. The lips tend to be full, and there may be furrows radiating from the mouth.

The skin is soft, thin and feminine. Strikingly, there is a total absence of eccrine sweat glands, or these may be diminished in number. The apocrine glands function normally. Because of these glandular defects the skin may be dry and there is loss of adequate reduction of body temperature through perspiration. The mammary glands may be normal, deficient or absent.

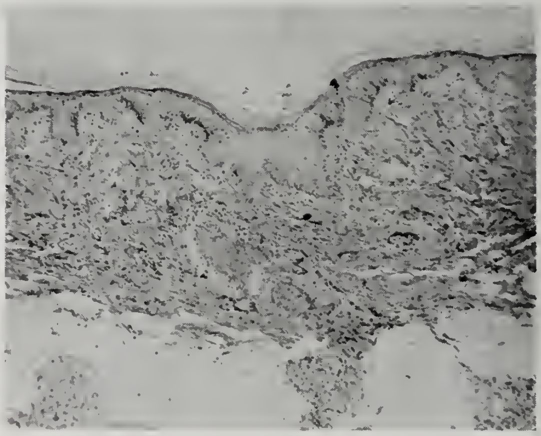


FIG. 8. Case 2. Skin of axilla showing occasional pilosebaceous structures in lower dermis and apocrine sweat glands in subcutaneous tissue.

The hair is sparse, fine and short. It is largely lanugo hair.

The nails may be normal but often show longitudinal furrows or slight atrophy, have a spoon-shape, and may be elevated distally by hyperkeratosis or poorly developed.

The teeth, which are poorly developed and peg-shaped, may be missing in part or may be totally absent.

The lacrimal glands are often deficient in function but may be normal.

There is deficient mucous secretion of the mucosa of the mouth, nose, pharynx or anus, with consequent chronic (atrophic) rhinitis and pharyngitis. Hoarseness, intermittent aphonia, and frequent upper and lower respiratory infections occur.

There are defects in the external sense organs of hearing and sight.

There is a primary refractory anemia or vascular purpura.[14]

All of these findings may not be present in every case. The most impressive physiologic feature is the lack of adequate control of heat loss from the body by perspiration. Because of this loss of function these patients do not tolerate heat well and they tend to develop an elevated body temperature without evidence of infection[9] or extremely high body temperature in the presence of infection.

The histopathologic changes consist primarily of defects in the development of the cutaneous appendages and of tissues arising from the ectoderm. Accordingly, the most striking and frequently found changes consist of failure of development of eccrine sweat glands, hair follicles and tooth buds. In the mucous membranes the absence of adequate secretion leads to inflammation with corresponding changes.

The diagnosis is not difficult to make in the well-established case. There are some infants who have normally sparse and fine hair and no teeth in whom the disease may be revealed solely because of their tendency to suffer from high temperatures without demonstrable cause. In order to evaluate a given case one should be familiar with organs or tissues that are derived from primitive ectoderm.[13] These include the following:

1. Nervous system including the adrenal medulla
2. Epidermis
3. Lining cells of the sebaceous, sudoriferous and mammary glands
4. Hair and nails
5. Epithelial lining of the nose, adjacent air sinuses, cheeks, roof of the mouth, and epithelium of the cornea, conjunctivae and lacrimal glands
6. Enamel of the teeth
7. Anterior lobe of the pituitary gland
8. Neuroepithelium of the sense organs

Among the conditions which must be differentiated are congenital syphilis, avitaminosis, Werner's syndrome, Rothmund's syndrome, and the Hutchinson-Gilford type of progeria.[10]

The treatment is primarily symptomatic. Efforts should be made to keep the patient and his environment cool. Strenuous exercises should be avoided in hot weather, and the patient should be taught to avoid hot fluids and drinks. One of the superfatted soaps may be tolerated if it is used in small amounts or one of the soap substitutes such as oily pHisoderm, or a surface-acting detergent (Tejalate) may be suitable for cleansing. The regular use of some bland oil such as olive oil, "baby oil," or theobroma oil (coco butter) will keep the skin lubricated and help to prevent dryness, scaling or fissuring. Plastic surgery for the nose may be attempted, and dentures are indicated for those without teeth.

SUMMARY

There are 2 forms of hereditary ectodermal dysplasia, the anhidrotic and the hidrotic. The anhidrotic form is rare, and there have been fewer reported cases in the Negro race than in the white race. It is inherited as a sex-linked recessive characteristic, and primarily affects males. However, the female carriers may show some mild features of the disease. The basic defect is the absence or diminution of the eccrine sweat glands. Therefore, the presenting complaint of the patient with the anhidrotic type may be hyperpyrexia, which is more likely to occur during the warm weather.

(Continued on page 254)

PRESIDENT'S PAGE

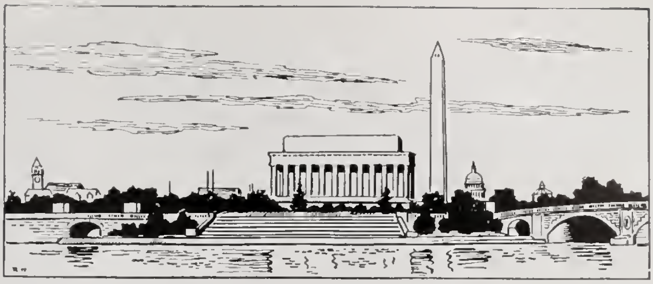
THE LINES ARE DRAWN

Social change always involves battle based on natural and proper ideological differences. The forces which are aligned against what is supposed to be radical and even revolutionary change are themselves commonly divided. Some want to offer complete opposition and obstruction while others seek to moderate inevitable change and to guide it.

In our District Medical Society we believe in a positive program and would like to propose alternatives to the things we dislike. In the overriding problem of finding better means to pay for health care we are dedicated to voluntary prepayment. We recognize that it must be more attractive to the public than governmental controls if it is to survive. We know that it must be expanded and that greater assurance of adequacy must be provided by us. We should strive mightily to see that governmental incursions into payment for health care be through the use of the best in the voluntary prepayment system. Only thus can all three logical sources of funds in these special programs be preserved and given sane balance.

The individual pays for himself by subscription to his health care plan. If he is in a poor-risk, high-utilization group (such as the aged) and is one of the millions already in a community-rated regular Blue Cross-Blue Shield program, his rate is subsidized by the whole group. If in addition community funds provided by any level of government were added on the basis of need as a secondary subsidy to the rate, we then would have in one system all of the logical sources of funds organized and balanced to protect and expand prepayment for health care. This would protect and improve it for all of our people. This should make public sense. The battle lines in our Society are drawn to promote a positive program such as this.

Donald Stubbs



EDITORIALS

MEDICAL LEADERSHIP IN REHABILITATION*

The rehabilitation of the handicapped person to his maximum capacity for functional, social, and economic independence may require a coordinated process in which several professional groups participate. Some patients need only single services, such as physical or occupational therapy. Others require a comprehensive procedure, beginning with a complete medical appraisal of the mental and physical status and including an analysis of the social background, the motivational factors, and a vocational evaluation of employment potentials and capacity for retraining.

Whether simple or complex, rehabilitation begins with medical care, preferably concurrent with the latter rather than subsequent to it. Certainly, the physician is not the sole determinator of the full potentialities of the patient and he must rely upon the social workers, the therapists, and the vocational rehabilitation counselors for their professional contributions. The physician is responsible for determining the level of mental and physical improvement the patient is likely to reach, the intensity of medical and other services the patient is capable of accepting, and the time such services should begin. Likewise, it is his responsibility to the patient, throughout the entire rehabilitation procedure, to be certain that the latter's health status is maintained at an optimal level.

These medical functions are shared by all physicians, regardless of specialty, who care for patients with any disease or disorder which may leave a residual disability. Responsibility cannot be left for the very small number of physicians who have chosen physical medicine and rehabilitation as a specialty and have received board certification in this field as a mark of their exceptional professional competence. To this group must be assigned the responsibilities for the management of very difficult cases, for the organization of special rehabilitation services, and for providing consultation to other physicians as necessary.

Unfortunately, there are many physicians who have not taken an interest in or accepted responsibility in regard to the rehabilitation aspects of their patient's medical problem. As a result, complaints of the following types are often made by nonmedical agencies administering rehabilitation programs, such as vocational rehabilitation, sheltered workshops, or welfare medical care (Aid-to-the-Disabled):

1. Physicians frequently fail, either deliberately or by just not getting around to doing it, to provide the necessary medical information to assist the agency in determining the eligibility of the patient for the rehabilitation program.

2. Physicians often write down, "totally disabled," without reporting any clinical findings to back up such a statement.

3. When adequate clinical reports are sub-

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* Reprinted by permission from New York J. Med., 1960, 60, 1218.

Opinion expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia

mitted, physicians too often state that no rehabilitation services are indicated, when it is known by both medical and nonmedical members of rehabilitation teams that patients with similar types of handicap often show good responses to rehabilitation.

4. It is recognized that rehabilitation services are not adequate in many areas of the state. Yet several of the existing high quality facilities are having administrative and financial difficulties because they are not receiving sufficient referrals from the physicians in the community. On the basis of numerous studies of the prevalence of disabilities in a community, it appears that there are many patients just not being referred for available services.

5. When patients are referred, the physician's request is often made for a single service, such as physical therapy or occupational therapy, when it is obvious to those experienced in rehabilitation that the person requires a comprehensive evaluation. Such persons often have problems in adjusting to their disabilities, which may be interpersonal or may relate to their dealings with their family or their community. On the other hand, it may be necessary for them to have a complete change in work habits or be trained for a new vocational field because the disability prevents them from returning to their former area of occupation. Thus, rather than a few physical therapy treatments a week, they should have a social evaluation and a prevocational counseling and testing service to be followed by actual vocational training if indicated. All of these services should be begun at the earliest possible time.

6. Physicians rarely consider the current labor market or the types of jobs available in the community when recommending handicapped patients for certain jobs. The most common complaint by employment specialists is that physicians state that the patient is suitable for "light work," without having any idea of what "light work" involves. The classic example is the referral of a patient for a position as night watchman, when it is well known that the watchman must make rounds through a multistoried building every hour and be ready to take quick action in case of fire or intruders.

Related to this lack of medical leadership is the frequent tendency of many nonmedical agencies to take for granted that they are the leaders in the rehabilitation field and that physicians play a very secondary role, simply a source for which medical services may be purchased. This seems to reach a peak in the current Federal legislative proposal for a Federal program for "Independent Living Rehabilitation" (primarily a medical rehabilitation program for handicapped persons with no potentialities for return to employment) which would be placed in the vocational rehabilitation unit of the states. This bill (HR-3465) is being sponsored by the National Rehabilitation Association. In a widely distributed "background statement," this association declares that only vocational rehabilitation counselors have the philosophy and the experience to undertake such a program. While holding that rehabilitation for independent living is not primarily medical, the statement emphasizes that the vocational counselors have had lots of experience in running medical programs, and are perfectly capable of doing so.

Thus we see here the pattern which is characteristic of phenomena in other areas of medical care. Whenever physicians fail to exert the necessary leadership in medical problems, there will be lay groups ready to step in and do it for them. It is still our philosophy that physicians should have the key role of responsibility for problems which are primarily medical.

Thus we must face the question of "who leads in rehabilitation." Medicine is not the only discipline concerned with the rehabilitation of disabled persons, whether the objective be employment or a maximum degree of independent living. However, the physician is a very important member of that team, and if he is not the captain, he would at least appear to be the quarterback. It is up to him to determine the medical potentialities of a patient and what the patient's mental and physical status will accept.

If the physician fails to carry out this role, there is the immediate danger of unfairness to the patient, who may thus not achieve his full potentialities. There is also the long-range danger of handing over medical problems to nonmedical groups on a silver platter.

I. JAY BRIGHTMAN, M.D.
Assistant Commissioner, Division of Chronic Disease Services, State of New York Department of Health

KEEPING THE MENTALLY RETARDED IN THE COMMUNITY

Recent estimates place the number of individuals in the population of the United States with an IQ below 70–75 at over 5 million. Only 5 per cent of this number are currently living in institutions; the remainder continue to live in the community and, as such, are a community responsibility.

About 80 per cent of these individuals fall into a group considered "educable" (IQ roughly between 50–55 and 70–75). As children a large majority of the members of this group, born to parents of lower socioeconomic status who themselves had reduced learning capacity or inadequate opportunity to learn, are largely unrecognized; it is only when academic demands are first made upon them in the public school setting that they come to light. If placed in special classes emphasizing practical performance tasks rather than academic ones they may remain in school until the age of 16. After leaving school they drop out of sight back onto the community, marry and have children, provide a significant percentage of the manpower pool for service jobs (dishwashers, janitors, stock boys, hospital orderlies), are law-abiding citizens, and come to the attention of the community only when they are involved in antisocial activity. (Incidentally, the majority of the criminal element arises from a group with somewhat higher intelligence.) The average physician has more contact with these people in his everyday life than in his medical practice since the economics of illness encourages them to seek medical care in public facilities. Institutionalization, should it become necessary, is dependent largely on nonintellectual factors—superimposed emotional disorders, broken homes, delinquent behavior.

On the other hand, the moderately or severely mentally retarded individual may be born to a family of any socioeconomic, ethnic or intellectual status and provides nosological designations familiar to most physicians—mongolism, craniostenosis, phenylketonuria, tuberous sclerosis, cretinism, etc.—as well as diagnostic entities resulting from a variety of well-known prenatal (prematurity, maternal rubella), neonatal (asphyxia, hyperbilirubinemia), and postnatal (postmeningitis) causes. From impetus given by the Nation-wide parents group, The National Association for Retarded Children, there is an ever-increasing demand that many of these individuals also be kept in the community and that special facilities be provided for them. The physician more and more will be expected to be familiar with and have the answers for often difficult questions of parents of these children: What can we do for them and where are we to seek help? One thing is assured—should the physician respond with rather preemptory advice to institutionalize, he will frequently incur everlasting parental enmity. If, however, he is able to direct the parents to an agency where they may have an opportunity to afford their child a complete evaluation and are able to assure themselves they have done everything in their power for their child (this sometimes takes years), they are then able to make more rational decisions as they become necessary.

In keeping with the modern-day comprehensive approach to any serious handicapping condition, facilities have been established in the D.C. area where parents may take their retarded child for evaluation from medical, psychiatric, psychologic, social and educational points of view. The D.C. Clinic for Retarded Children, the Arlington County Mentally Retarded Children's Clinic (both supported by Federal funds and under the overall direction of the respective health departments; services are without charge), and the Retarded Children's Clinic located at Georgetown University Medical Center are examples of these. An additional evaluation center has recently been organized by the Prince George's County Health Department. At these locations parents have an excellent opportunity to find the answers they seek regarding the diagnoses and to gain some idea of the child's future potentials, as well as to participate in realistic planning for the future.

The last one—realistic planning—is a cropper. Educational, vocational and recreational facilities for the mentally retarded child in the District of Columbia lag far behind those of other areas. It is valueless to talk in terms of expensive residential schools when parents are thinking in terms of day-school facilities. The D. C. Department of Public Schools maintains one 40-pupil school for children aged 7–16 years with IQ's between 35 and 55; the need is for 10 times that. Private day schools in the community sponsored by the local parents' group, Help for Retarded Children, and the St. John's Developmental Services for Children provide for a few more pupils. There are others, but the list becomes rapidly exhausted.

What happens when the teenage retardate would ordinarily be ready to assume job-responsibility? The Occupational Training Center, sponsored and managed by Help for Retarded Children, maintains a sheltered workshop, and is also contracted by the D. C. Department of Vocational Rehabilitation to provide evaluation, training and job placement, when feasible, for the retarded boy or girl 16 years of age or older. Total capacity of this installation is only 75 to 80, meeting only a fraction of the need.

Why do all this? Why stimulate more facilities? Those to whom only a dollars and cents argument will prevail may be assured that the retarded person adjusting in the community will eventually reduce the portion of the tax load now going into building ever bigger institutions. For others, who choose to think of the retarded as human beings with feelings, desires and aspirations, the picture of a mentally retarded young man or woman contributing his part to the community, however small and perhaps only in terms of living quietly in a semi-protected family setting, is enough reward.

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Clinic for Retarded Children,
Bureau of Maternal and Child Health,
Department of Public Health, District of Columbia

HONEST NEWS REPORTING

We have a high regard for newspaper reporters in general. Most of them do an honest job of reporting the news. It is our understanding that the job of a reporter is to record the facts and that it does not include slanting the facts, taking sides, or adding bias to include the political philosophy of his newspaper. The latter is understandably within the purview of the editors of the paper or of the commentators whose columns appear in the paper.

Recently we have been shocked to note that in one of our local newspapers, which is quoted widely throughout the country and indeed the world, reports of important meetings have been grossly slanted with unfair, if not truly dishonest, and incomplete statements of what transpired. We believe in the freedom of the press, but only if it is treasured as a public trust and with accuracy and veracity as its basic principles. The press has great power, but as with all power, if not used wisely, it can do a great deal of harm.

THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

IN & OUT OF FOCUS

By the Observer

The Australian Plan

Can voluntary health insurance plans as they exist in this country today be developed to a point where they meet the demands and needs of the people? Will they fail because they prove too costly to the individual? Will subsidy by Government or from other sources be necessary to assure their continued success?

Sir Earle Page, former Prime Minister of Australia and a surgeon for some 50 years, is one of those who does not believe that voluntary health insurance can succeed without subsidy. In a provocative book entitled, "What Price Medical Care?"* he states, "I offer . . . the respectful opinion that the Americans will have done wisely when and if they adopt a medical plan which combines self-insurance with government aid."

Sir Earle is no advocate of compulsory health insurance. Far from it. At one point in his book he warns the people of this country:

> "Let me also stress my belief that men of medicine in your country can ill afford to stand by and watch the tide move in upon them, and then face the almost hopeless task of turning it back. In Great Britain, for a significant example, socialized medicine has come to stay, though it may be slowly and painfully modified and amended to make it work better and more fairly for all concerned. In the foreseeable future the British people will not abandon it, nor will any government risk its life by suggesting that they should."

The establishment of a subsidized voluntary health insurance plan in Australia was accomplished largely under Sir Earle's guidance. The following are highlights of the Plan, which is in reality 2 plans, a Medical Benefits plan and a Hospital Benefits plan.

The Medical Benefits plan began operation in July 1953. It is available to all members of "approved" medical insurance organizations. These are sometimes referred to as Friendly Societies. Listed among them are such organizations as Mutual Benefit Society of the Employees of the Melbourne and Metropolitan Tramways Board, the Hamilton Building Societies' Hospital Rebates Fund, and the Clerical Fund of the Archdiocese of Sydney. Approximately 150 similar organizations now participate in the Australian Plan.

So long as the subscriber pays his weekly premiums he is entitled to medical benefits. The Commonwealth Government subsidizes the cost of medical treatment incurred by members of the approved organizations and their dependents. "The amount," Sir Earle states, "varies in relation to the nature of the medical service, but for any particular service it remains the same, whatever actual fee the doctor charges, or whether the service is rendered by a general practitioner or a specialist." The amounts of the benefits or subsidies the Government will pay are set forth in a Table of Subsidies, covering every known procedure.

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* Published in 1960 by J. B. Lippincott Company of Philadelphia.

So far as possible Government subsidies are paid through voluntary medical insurance organizations. "The Government's aim," Sir Earle states, "is that its subsidy plus the payment from the organization [to which a member belongs] should cover the major portion of the doctor's charges."

A point is made of the fact that the Government does not "try to interfere in the administration of these organizations but it will grant approval only to an organization that complies with certain minimum requirements and conditions which are designed to protect the members."

Sir Earle emphasizes that the Plan does not set medical fees. These are determined by the physician, who "charges the patient according to his professional judgment of the value of his services and the patient's ability to pay, but the Government's allowance or contribution is an amount fixed by law."

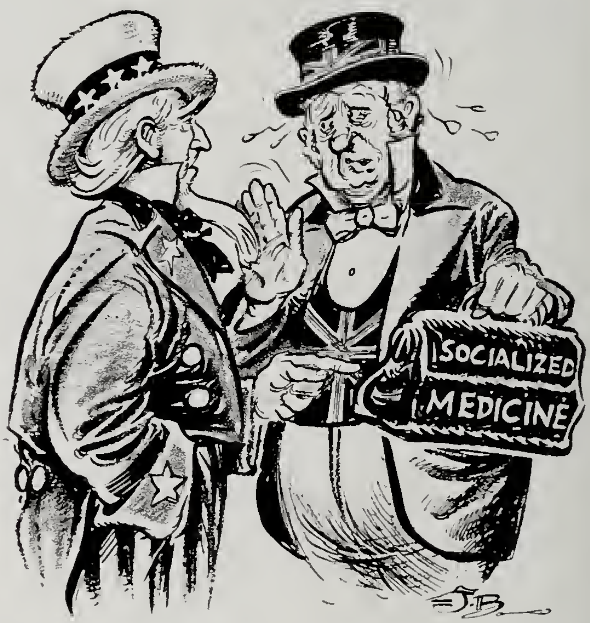
As to the Hospital Benefits plan, the Commonwealth Government subsidizes all citizens who are confined to public hospitals to the extent of 40 per cent of the cost. The State in which the citizen resides assumes obligation for the remainder.

Should the patient receive treatment in a private hospital under the plan "the ordinary hospital benefit" is paid to the hospital by the Government. In addition, the Government supplements the ordinary benefit by an additional payment amounting to one-half "the ordinary hospital benefit" for patients who are also members of a recognized hospital insurance organization. The hospital organization must pay minimum benefits from their own funds. These vary according to the rates of contributions by members.

To obtain Government benefits the member must obtain a Certificate of Hospitalization from the hospital which he presents to his insurance organization. That organization pays the additional benefit for the Government and is later reimbursed.

Sir Earle acknowledges his indebtedness to the various voluntary health insurance plans in the United States. He writes:

> "Insurance against the hazards of ill health and accident is an old story in Australia. But nowhere in the world has the principle of self-protection against the 'natural shocks that flesh is heir to' been carried so far and developed so competently, without governmental assistance, as in the United States. According to recent reports the number of Americans now enrolled in voluntary insurance plans, either those of commercial companies or nonprofit community organizations such as Blue Cross and Blue Shield, exceeds 120,000,000 persons. This remarkable figure is twelve times the present population of Australia!
>
> "It is evident that the people of the United States have recognized the necessity of maintaining a high standard of public health, even in the face of mounting costs of medical services. In a straightforward way they have set about solving the problem. We in Australia have watched your progress and been stimulated by your example. Your methods of management have helped us to sharpen our own efforts, with the result that the great majority



of our people are now covered by various sections of our plan. It is doubtful whether we could have gone so far, and so fast, without the encouragement and guidance we have found in the outstanding success of Blue Cross and Blue Shield in the United States.

"I believe that Australia can pay part of its debt to America by suggesting solutions for many of these problems, based on our own experience. It is my hope that some of the special devices we have perfected in legislation affecting medical plans and their operation may now be of help to the United States, which today is the outstanding stronghold of private medicine and voluntary hospitals in the world."

Whether or not American medical leaders will find Sir Earle's views at this or any future time acceptable is doubtful. Regardless of their reaction, it is quite clear that in his country the Plan has apparently worked out to the satisfaction of the people, the hospitals, and the medical profession.

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Corporate Medical Practice

A few days before these lines were written your Observer received his copy of the Medico-legal Newsletter, *The Doctor & The Law*, for February, 1961. The first article in this issue was devoted to the corporate practice of medicine. In a review of the subject the Newsletter reminds its readers that the AMA's Judicial Council long looked upon corporate medical practice as unethical. The Council took the position in 1930 that "such practice is detrimental to the best interests of scientific medicine and of the people themselves" and that "the public will be poorly served by such a practice." However, the Newsletter states physicians today do not share this view. The primary reason, it is explained, stems from a "yearning to gain advantages of a tax nature."

Physicians and their attorneys in all parts of the country, it is reported, have recently shown a renewed interest in this subject. A contributing factor was the adoption of the following resolution by the AMA's House of Delegates in 1957:

"RESOLVED, That the House of Delegates affirm that it is within the limits of ethical propriety for physicians to join together as partnerships, associations or other lawful groups provided that the ownership and management of the affairs thereof remain in the hands of licensed physicians."

The phrase in this resolution, "other lawful groups," was interpreted by an AMA official whom your Observer consulted to mean that corporate practice is ethical provided it is legal in the jurisdiction where the physicians involved practice and if control of the corporation remains in their hands.

Because of the many requests for assistance in drafting legislation in states which do not now permit the corporate practice of medicine, the AMA's Law Department has prepared a bill under which "a state legislature may legalize the formation of professional corporations." The proposed statute is entitled "The Medical Corporation Act" and is considered adaptable for introduction in any state to fit local needs.

In the District of Columbia the mere fact that a corporation is legal does not mean that it does not or cannot commit illegal acts. If the corporation were to hold itself out for the practice of medicine this would be an illegal act. On the other hand, if the corporation utilizes doctors in their individual professional capacities for the purposes of diagnoses and treatment and the doctors sign the report or reports individually, this, in the opinion of the legal counsel consulted, is quite proper and legally acceptable.

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Religion and Medicine

What promises to be a rewarding endeavor is being planned by the Committee on Liaison with the Clergy recently created by the Society's Executive Board. Chairman of the Committee is Dr. Zigmond M. Lebensohn. Representing the Society, in addition to Dr. Lebensohn, are Drs. Thomas W. Mattingly, Arthur A. Morris, Jr., and John Parks. Representatives of the clergy are: Rabbi Norman Gerstenfeld, Washington Hebrew Congregation; the Rev. T. J. O'Donnell, S.J., Regent of the Georgetown University School of Medicine; Canon Richard Williams, Washington Cathedral; and the Rev. Harold Yoder, Director of the Department of Institutional Ministry of the Washington Council of Churches.

At the Committee's meeting on March 2, 1961, Rabbi Gerstenfeld proposed that an Annual Lectureship be sponsored and underwritten by the Society. The reaction to this proposal was favorable, the Committee agreeing that the best obtainable speaker be chosen lecturer and that its members be canvassed for suggested topics. It was further agreed that a panel discussion should follow the address in which both representatives of the clergy and the medical profession would participate. The Committee unanimously voted to recommend to the Society's Executive Board the establishment of the Lectureship, requesting that the Committee be given authority to proceed. At the time this is written, the Executive Board had not met to consider the Committee's recommendations.

Among other matters which will receive the Committee's attention at subsequent meetings are hospital parking facilities for the clergy; arrangements to page them at the hospitals they visit; consideration for the wishes of patients with respect to seeing or not seeing a clergyman; routine listing of specific religious affiliations of patients by hospitals; closer liaison between the clergy and physicians as regards the chronically ill; consideration of religious dietary restrictions as they relate to a patient's health; mutual understanding in regard to pastoral and psychiatric counseling; and the establishment of a room in hospitals where physicians and clergymen can talk in private with bereaved families.

As many of the above are intimately associated with the conduct of hospitals, it was decided that the Hospital Council of the National Capital Area should be contacted for its views and suggestions.

All religious bodies have become cognizant of the desirability of a closer relationship between the clergy and the medical profession. In fact, many theological students have for several years received part of their training in hospitals.

In a recent issue of the *Bulletin of the Hennepin County* (Minn.) *Medical Society* there appeared an article entitled "Religion: Medicine's Newest Ally," by the Rev. Elof G. Nelson, Director of the Department of Pastoral Care, Fairview Hospital, Minneapolis. Pastor Nelson stated, in part: "The structure of our understanding of the scope of man in and out of illness calls for a broader insight into methodologies. Clergy cannot give medical care; physicians are not trained to give soul care. To know our limits and to expand the characteristic realities to which they both attest is a very real problem before us today. Clergy should know when to refer to physicians; physicians must also discover that they can refer patients to pastors. In mutual trust, confidence in each other's professional capacity will become more alive.

"The fact that we are not doing the best job of the 'togetherness' in our concern for the health of people—specifically, those who have no organic basis for their ills—is not the fault of any one discipline. Perhaps the fault lies in the places where we secure our education. We have begun to use physicians as teachers in the theological-clinical setting. Scores of seminaries in Protestant, Catholic, and Jewish traditions have done much to alert students to the psyche-soma relationship. Younger pastors are becoming psychologically oriented and therefore think and practice with deeper and more significant understanding of man in the stresses of life."

The fact that physicians through their medical societies here and elsewhere have indicated their desire to become more closely associated with the clergy in an organized effort to bring about a better understanding of each other's functions should result in comfort and encouragement to many patients.

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Membership Luncheons

More than a thousand members of the Medical Society have attended Membership Luncheons since the first one was held on November 9, 1949. As most members know, these luncheons were established primarily for the purpose of providing newly elected members an opportunity to learn something about the Society and its functions. Attendance at the luncheons has been limited to a maximum of 25 so as to assure their informality.

Those who, over the years, have attended the luncheons have indicated their pleasure and satisfaction with them. Some have been enthusiastic in their praise, stating that they have appreciated meeting some of their colleagues and talking with the President and other officers of the Society personally. All in attendance highly approved the fact that luncheons began promptly at the appointed time and that they never lasted more than an hour.

A disappointing aspect of the luncheons has been the number of members who for one reason or another have not accepted the invitations sent them. To assure maximum attendance it has been necessary to extend invitations to more than twice the number expected. Thus, at least half of the new members have not attended any luncheons.

In view of the importance of their participation, it was proposed at a meeting of the Executive Board on February 27, 1961 that the Membership Luncheons be continued but that henceforth they be limited to applicants for membership rather than to newly elected members. Furthermore, that applicants be required to attend before they are elected unless for valid reasons they are exempted from doing so.

Applicants are required by the Constitution and By-laws to appear personally before the Board of Credentials, which passes on their qualifications for membership. It was therefore proposed that luncheons for them be held on the day they are interviewed by the Board.

The Executive Board thought well of the proposal and authorized that the new procedure be adopted with the understanding that the Board of Credentials be consulted for the purpose of working out a satisfactory arrangement with that body. The Board of Credentials has not yet had an opportunity to consider the matter.

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Juvenile Delinquency and Divorce

The apparent casualness with which divorces are accepted by some segments of our society has been deeply disturbing to many people who prize stable family ties. They deplore the frequency with which persons of prominence figure in a succession of widely publicized divorces. Most disturbing to them has been the emotional impact where children are involved. Small wonder, they say, that these unfortunate offspring become delinquents.

No defender of divorce, Dr. J. Louise Despert, a New York child psychiatrist, admits that the separation of parents is at best "an unhappy experience." However, she insists legal divorce is not the major cause of juvenile delinquency. In a book[1] published a few years ago she cites as an example a study of 18,000 delinquent children in which it was found that only one tenth of delinquent boys and one fifth of delinquent girls came from families where there had been a divorce. From what kind of homes did the others come? Some were from homes where there had been the death of a parent, others from families where there was desertion. The largest number came from homes where marriages had been "emotionally broken, without having their disharmony overtly recognized by a recourse to law."

In the latter circumstance there exists what Dr. Despert calls "emotional divorce." It is where "troubled parents and children . . . are emotionally severed from each other by deep and serious rifts."

> "Not legal divorce but emotional divorce," she writes, "is the destroyer of children. Countless more couples live out their lives and rear their children in the destructive climate of emotional divorce. Among the hundreds of unhappy children who come to the attention of a child psychiatrist, I have seen many whose parents had no thought of divorce. . . ."
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> "Husbands and wives who allow discontent to mount, resentment to accumulate, hostility to dominate in a relationship begun in warmth and hope, are courting emotional divorce. That such negative emotions may arise in so intense and demanding a partnership is not remarkable. A marriage, like the human beings who make it, can scarcely be without a flaw. The danger is not so much in the human imperfections of its partners as in their attitudes toward those imperfections. If they can continue to accept each other with warmth and understanding, then the marriage continues sound. But if rejection becomes the pattern, then we have a widening chasm separating parents from each other, and a consequent widening chasm parting parents from their children.
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> "This is emotional divorce. . . ."

Courts generally throughout the country, in Dr. Despert's opinion, are not properly organized to solve problems of children where there is legal divorce. Family Courts or Domestic Relations Courts exist in a few major cities, but these are for the most part understaffed and serve only low-income families. Some employ the services of psychiatric or social case workers, a few have staff psychiatrists. In the District of Columbia there are 3 judges assigned to the Domestic Relations Court. There is 1 psychiatric social worker but no psychiatrist on the staff.

> "It is becoming increasingly clear," Dr. Despert states, "that the court needs other professions besides the legal in weighing the social and emotional claims brought up in separation and divorce. Nowhere is this need more acutely felt than in cases involving children."
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> "Under the stimulus of the soaring divorce rate," Dr. Despert concludes, "the subject of preparing young people for marriage has become the focus of much recent attention. Courses in home management and child rearing appear in college catalogues. In some states sex education has been introduced into the schools over agitated opposition.
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> "All this is good but it is not enough. Preparation for marriage is only another aspect of preparation for mature living, and it begins not the day before the wedding, not in college or in high school, but in the cradle."
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> ". . . It is the slow growth of emotional maturity through childhood and adolescence for which the family is designed. The sheltering, guiding, and liberating love of emotionally mature parents is the child's best insurance that he will develop his own maturity for marriage and child rearing, for his work, his leisure, and all the many aspects of living."

T. W.

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[1] DESPERT, J. L.: Children of Divorce. Garden City, N. Y.: Doubleday, 1953.

THE PRESS AND LEGISLATION FOR THE AGING

EDITOR'S NOTE: The following editorials on a subject of serious import to both physicians and laymen appeared in the Washington papers and *The Wall Street Journal* on February 12 and 13.

MEDICAL CARE FOR AGED

More than has been done in the past surely will be done in the future to ease the often catastrophic burden of illness, especially for those whose advancing age has dropped them from the ranks of wage-earners.

If the people of this country are convinced that it is the responsibility of the National Government to assume the major costs of hospital, clinical and nursing care for every citizen covered by Social Security who reaches the age of 65—regardless of the individual citizen's ability to assume that responsibility himself—the bill proposed by the Kennedy administration is probably the least painful way of accomplishing that purpose. It would finance the cost of such medical care by a slight increase in the Social Security tax.

But if this is to be the approach, there are at least 4 major points which should be clearly understood:

1. Enactment of the bill favored by President Kennedy would represent another major step toward a welfare state in which huge Government assumes more and more obligations, and accompanying control, in regulating the activities of its citizens. We are not particularly frightened by such scare words as "socialized medicine," and the President takes pains to explain that the provisions of this measure do not cover doctor bills or the citizen's choice of his physician and hospital. But if it is the National Government's responsibility to pay the hospital costs of senior citizens, why does that responsibility stop short of doctor bills? If free medical care at Government or taxpayers' expense becomes available at 65, why should it not become available at 60, or 45? Once it is recognized that it is Government's responsibility in one case, who can really contend that such responsibility will not eventually extend to every case?

2. This bill abandons for the first time the hitherto prevailing concept that medical care should be provided without cost only to those who lack the means to pay for it themselves. Those who are able, in old age, to meet such expenses from their own resources doubtless are in the minority. But there are a great many who can. Why is it necessary or even desirable to assume that Government is under equal obligation to provide "free" medical care to all of its citizens once they have reached the age of 65?

3. The Social Security tax increase proposed for financing medical care is small, a quarter of 1 per cent each for employers and employes on salaries up to $5,000. For an employe at that salary it would mean merely $12.50 a year, cheap health insurance indeed. But the Social Security tax has already risen to 6 per cent of all salaries up to $4,800, divided equally between employer and employe. With the increases proposed in the health bill, and other increases already proposed or pending, the total Social Security tax will have reached 10 per cent by 1969. For many people earning $5,000, this means they will soon be paying almost as much in Social Security, without deductions, as they pay in income taxes. It is time that serious consideration be given to fixing some statutory limit on the Government's "take" on payrolls, which has already become substantial and promises to become much more.

4. Congress last year passed and the President signed a bill providing for grants to the states in a voluntary medical care plan which is yet to demonstrate its relative success or failure. There has not yet been enough experience upon which to base final judgment as to the merits of this approach. It is significant, however, that so few states have taken advantage of the unlimited Federal matching funds made available. If the states cannot afford or are otherwise unwilling to provide medical care for elderly citizens in lower income groups, with this help from the National Government, why should the National Government be expected to do it for everybody over 65?

These and other questions will be examined in hearings on the new Kennedy health plan, which has been changed only slightly from the one defeated last year. They should receive clear answers before the bill becomes law.

—*The Washington Star*, February 12, 1961

NATIONAL HEALTH SERVICE

In England's Parliament as well as in the Congress of the United States there is controversy over government-sponsored medical care. The differences are instructive as well as interesting.

Here the argument is carried on to a large extent through the use of epithets such as "socialistic"; and governmental concern for the health even of the aged is denounced by spokesmen for the organized medical profession as somehow immoral. But in England the argument is entirely over the size of certain fees to be exacted for health services; the Labor opposition says that the Conservative government proposes to set these too high. Neither Conservatives nor Laborites appear to have the slightest inclination to do away with the program; instead, they vie with one another and with the Liberals in supporting it.

There has been so much misinformation in this country and there have been so many misleading charges about the British National Health Service that it is helpful to have some facts on the subject made available by the British Information Service. Far from being, as some American Medical Association rhetoricians assert, a Socialist scheme or a Communist coup, the health program was recommended by Lord Beveridge, an eminently respectable Liberal, and was accepted in principle in 1944 by the national government under Sir Winston Churchill.

Participation in the program is wholly voluntary on the part of doctors and patients alike. Anyone is free to use the service or not as he prefers, to use it in part if he wishes to consult a private physician while availing himself at the same time of a service doctor, to go as he thinks best to a public or a private hospital. Doctors may participate or not as they desire; and they may, if they wish, keep a private practice alongside their service practice.

Moreover, a patient is free to choose any doctor and to change doctors when he desires to do so. There appears to be no foundation whatever for the charge that the quality of British medicine has suffered from the scheme and even less substance to the charge that it is widely disliked in Britain. The fact is that 97 per cent of the people in England and Wales have chosen a doctor within the service, that nearly all doctors, dentists, opticians, etc., have joined in, and, finally, that the general health of the British people seems very high.

One other foreign example should, perhaps, be put before the leaders of the AMA. The Canadian Medical Association has announced that 93 per cent of its members are in favor of negotiating "an acceptable plan" for a national health service in Canada; 83 per cent of the Canadian doctors said that they consider a tax-supported medical plan either probable, inevitable or imminent.

The British and Canadian experiences may or may not appeal to Americans; the United States is in no wise bound to follow or copy them. All that is under discussion in this country is a limited plan of medical care for the aged to be financed through Social Security contributions and carried out by private doctors. The question, really, is what all the shouting is about.

—*The Washington Post*, February 13, 1961

A MODEST PROPOSAL?

When a man comes promising to do good for little children and to ease the sorrows of age, anyone who questions him is bound to sound a little like a skinflint who would take candy from babies and push his grandmother out in the cold.

If you think not so, watch what is going to happen to those in Congress bold enough to raise questions about President Kennedy's proposals to meet the "urgent needs" of the Nation's children and the "haunting fears" of old age that beset the rest of us. Against the emotional wind blown by such imagery, reason is a feeble reed.

Yet somebody had better ask the questions. It is not merely that hidden beneath the tinsel there are a good many prickly nettles; the promise itself is not at all what it seems. For that promise is not simply that society will try to improve its way of taking care of its indigent and helpless, with which aim no man would quarrel; but rather that by this program the Government is going to improve the medical care of all the people. That promise, it seems to us, is pure deceit.

It is going to take some very probing questions even to uncover the tangible nettles tucked away in this program. Offhand, we can recall no program of such magnitude ever being submitted to Congress without a single line in the President's message as to what its cost will be, now or ultimately.

There are, to be sure, some figures given on what the Government says it is going to tax the people initially, but even they are not exactly what they seem.

The President speaks of raising Social Security taxes by only one-quarter of 1 per cent and of lifting the base of this tax to the first $5,000 of income, a seemingly trivial price to pay for such wonderful benefits. But this quarter of 1 per cent is pyramided; under present law Social Security taxes are already scheduled to go to 3½ per cent for every wage-earner in 1963; to 4 per cent in 1966; to 4½ per cent in 1969. This new proposal is in addition thereto.

And, of course, in addition to this there will be an equal amount levied, so the law phrases it, upon the employer, the implication here being that since the employer pays it, it's a gift to the wage-earners. But slice this as you will, it means that upon the paycheck of every man affected there will be a payroll tax of more than 9 per cent—this 9 per cent, mind you, over and above all income taxes, where the lowest rate already is 20 per cent.

But if this in itself is no trivial sum, it still offers only a glimpse at the actual cost of this program. It was not without reason that this question was lightly passed over in the President's message. Nobody knows. And the way this program is proposed, nobody can possibly know—neither the President, nor Congress, nor you who are going to pay for it.

Consider: The proposal is that after an initial deduction, which must not be less than $20, the Government will pay "all costs" for up to 90 days in the hospital "for a single spell of illness." Or "all costs" of nursing home facilities for 180 days. "All costs" in excess of $20 for outpatient diagnostic services. With such an unlimited commitment it is no wonder that Government statisticians haven't yet come up with a cost figure.

Not even the Administration pretends the cost will be covered by the $1.5 billion which is supposed to be raised by the "extra" Social Security tax. And whatever that mysterious figure is now, it, too, is only a beginning. Already the age of the proposed beneficiaries has dropped from 68 to 65 in a bare 6 months; the period of benefits has been extended from earlier proposals; and some new benefits have been added. What would happen to the program, once started, is incalculable.

But if you want to get some idea of the upper reaches of this commitment which the Government would now undertake, you can do a little arithmetic with the President's own figures. He says there are 16 million people over 65. Half of them have medical costs of $700 or more a year. There is a liability here of over $5 billion, just counting the half with major medical problems.

But enough of these nettles. There is no use in even trying to grapple with the limitless cost-increases that lie in future changes in the law, or what this wholesale "send-the-bill-to-the-Government" program will do to future costs. No one can guess at the effect on hospitals from overcrowding when the Government pays most of the bill.

For the costs are not the only thing that tarnish the bright promises, although these are staggering sums for the whole country to pay in order to take care of the few truly needy.

The President assures one and all that this "very modest proposal" is not "socialized medicine." It is not being paid for by the general taxpayer, he says; only by employers and employes, as if the taxpayers were somebody else. And it is not, so we are told, going to touch the private medical system of the country.

Yet here is a measure for the Government to take over the responsibility of medical care for all of us in age, indigent and self-reliant alike. We would have no choice in the matter. So doing, Government takes on the responsibility to see that the money is spent as public funds; it cannot in duty pay out public funds to just any doctor or to just any hospital. Nor will it; the medical facilities for which Government pays Government funds must meet Government standards, and those standards may be medical, financial, social or whatever the Government would make them.

To pretend that this will not alter, in a deep and fundamental way, the health and medical system of the country is specious. We have no doubt that the few and needy will get better medical care than before. But the price of providing for the needy in this way is not to be measured only in billions of dollars, however many of them there may be, but in what the great apparatus of Government will do to the medical care of all the rest of the people in a country which has achieved—without Government—the highest medical standards of any country in the world.

If this is not socialized medicine, it is nothing. And the President himself promises that this modest program for old people is not an end but a beginning —a "foundation on which to build."

Somebody had better ask questions about what it is that is being built.

—*The Wall Street Journal*, February 13, 1961

TREATMENT FOR EMOTIONALLY DISTURBED CHILDREN

The Hillcrest Children's Center is a new, comprehensive mental health service for emotionally disturbed children and their families. Located at 4124 Van Ness Street, N.W., it is the first agency to offer in one setting a program of diagnostic and treatment services on an outpatient, day treatment and residential basis for emotionally disturbed children in the Washington area. This unique combination of programs will permit flexibility and continuity in psychiatric work with these children and their families.

This new agency has been formed by the merger of 3 existing agencies: Hillcrest Residence, a residential facility for treatment of emotionally disturbed children; Children's House, a day school and treatment center for disturbed children; and the Washington Institute of Mental Hygiene, a psychiatric clinic for children and adults.

Integration of the 3 agencies is the outcome of a study, made under the direction of the Health and Welfare Council of the National Capital Area, to find a plan for expanding and augmenting the services hitherto offered by these agencies, which since 1953 have shared the Hillcrest buildings at Nebraska Avenue and Van Ness Street, formerly the Washington City Orphan Asylum.

The new agency will:

1. Combine the 3 agencies into a unified psychiatric, medical and treatment center for emotionally disturbed children and their families.
2. Provide both residential, day care and outpatient psychiatric treatment services.
3. Conduct a school program for children under treatment who are not yet able to attend regular school.
4. Establish an intraining program for child psychiatrists, psychologists, social workers and teachers.
5. Engage in research as a part of the agency program.

Dr. Jean Yacoubian is serving as acting director of Hillcrest Children's Center until a permanent psychiatrist-director is engaged. He has been director of the Washington Institute of Mental Hygiene since 1959. Dr. Reginald S. Lourie, Chief of Psychiatry at Children's Hospital, is Chairman of the Technical Advisory Committee. Dr. William L. Granatir is Chairman of the Executive Committee.

Both Children's House and the Washington Institute of Mental Hygiene have shared in the United Givers Fund, and it is anticipated that the new agency will also be a member of the United Givers Fund.

Hillcrest was originally the Washington City Orphan Asylum, the first orphanage in Washington, founded in 1815 by Act of Congress, with Dolly Madison as the first Directress. Its original constitution provided: "The children shall be educated, fed and clothed at the expense of the Society. They must have religious instruction, moral example and habits of industry inculcated in their minds. The Governess must be a woman of pious character and capable of teaching to read and sew. She shall engage to be faithful, tender and unremitting in the care of the children." The first recorded gift to the Asylum was 4 Bibles. The institution continued to care for the poor and homeless orphans of Washington for many years. In 1926 it located at Hillcrest, a 14-acre site at Nebraska Avenue and Van Ness Street, N.W., in a then undeveloped part of the city.

Twenty-seven years later, as the need for this type of institution vanished, the board decided to change the asylum site into a center for psychiatric services. Hillcrest became a residential agency for

(*Continued on page 254*)

DOCTOR!

DO YOU KNOW

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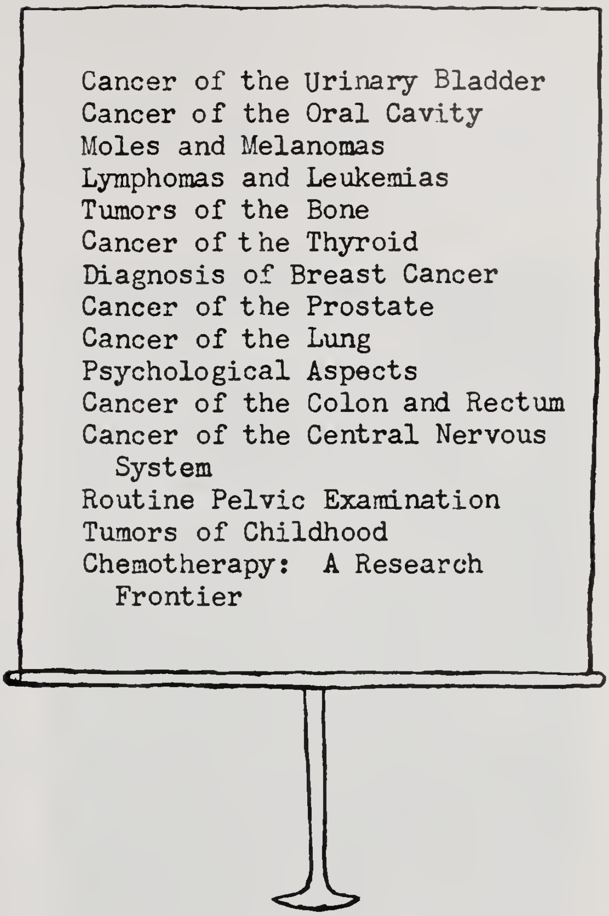
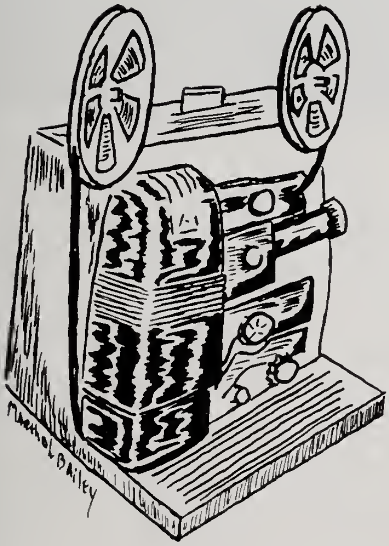


Cancer of the Urinary Bladder
Cancer of the Oral Cavity
Moles and Melanomas
Lymphomas and Leukemias
Tumors of the Bone
Cancer of the Thyroid
Diagnosis of Breast Cancer
Cancer of the Prostate
Cancer of the Lung
Psychological Aspects
Cancer of the Colon and Rectum
Cancer of the Central Nervous System
Routine Pelvic Examination
Tumors of Childhood
Chemotherapy: A Research Frontier



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Washington 6, D.C.
EXecutive 3-3690

NEW SURGEONS GENERAL OF NAVY AND PUBLIC HEALTH SERVICE

Rear Admiral Edward C. Kenney, M.C., U.S.N., was sworn in as Surgeon General of the Navy, February 14, to serve for a term of 4 years. He succeeds Rear Admiral Bartholomew W. Hogan, who has retired from Naval service.

REAR ADMIRAL EDWARD C. KENNEY, M.C., U.S.N.
Surgeon General of the Navy

Dr. Luther L. Terry, Assistant Director of the National Heart Institute since 1958, was confirmed by Congress, March 2, as the new Surgeon General of the Public Health Service. He succeeds Dr. Leroy E. Burney, who has held the post since 1956.

Rear Admiral Kenney, a native of Ohio, studied medicine at the University of Cincinnati College of Medicine, receiving his medical degree in 1929. Following graduation he was appointed Assistant Surgeon, with the rank of Lieutenant (junior grade) in the Medical Corps of the Navy, and through subsequent promotions attained the rank of Rear Admiral to date from September 1, 1957.

He was Senior Medical Officer on the *U.S.S. Boise* during World War II when that ship was engaged in the Battle of Cape Esperance, Guadalcanal, in October 1942. For "extraordinary heroism" during that battle he was awarded the Navy Cross.

After the War Rear Admiral Kenney completed various assignments. In 1950 he enrolled for postgraduate study as a Fellow in Internal Medicine at the Mayo Foundation for Medical Education and Research, Rochester, Minn.

Following duty as Chief of Medicine in the U. S. Naval Hospital at Camp Lejune, N. C., he held the same position at the Naval Hospital in Philadelphia, and later was Executive Officer there. In 1955 he assumed command of the U. S. Naval Hospital in Bethesda, Md., and served as Commanding Officer of the National Naval Medical Center until the fall of 1956.

LUTHER L. TERRY, M.D.
Surgeon General of the Public Health Service

In March 1958 he was assigned duty as Assistant Chief of the Bureau of Medicine and Surgery for Personnel and Professional Operations. He served in this assignment until May 1959, when he was designated Deputy and Assistant Chief of the Bureau.

Rear Admiral Kenney is a member of the American Medical Association, a Fellow of the American College of Physicians, and a diplomate of the American Board of Internal Medicine. He has received many decorations in addition to the Navy Cross.

Dr. Terry, the new Surgeon General of the Public Health Service, is a member of a medical team which is known for its extensive research on the enzymes. A native of Alabama, he graduated in medicine from Tulane University in 1935. In addition to being a research scientist he is a medical educator, having served on the faculties of Washington University in St. Louis, Mo.; the University of Texas in Galveston; and Johns Hopkins University, where he is Assistant Professor of Medicine, a position he has held since 1953.

Dr. Terry was appointed to the inactive Reserve Corps, Public Health Service, in 1942. He was called to active duty in the Reserve Corps the same year, and was appointed to the Regular Commissioned Corps in 1944. He was Chief of General Medicine and the Experimental Therapeutics Branch of the National Heart Institute from 1950 to 1958, when he was promoted to Assistant Director of the Heart Institute. He is a member of the Medical Board of the Clinical Center and Chairman of its Steering Committee. He is Director of the Residency Training Program of the National Heart Institute, and is active in many other scientific projects.

Dr. Terry is certified by the American Board of Internal Medicine. He is a member of the Montgomery County Medical Society, a Fellow of the American College of Physicians, and a member of the American Medical Association and the American Heart Association. He is a member and Past President of the D. C. Trudeau Society and the Public Health Service Clinical Society. Since 1957 he has been a Consulting Editor to the MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA.

FACILITIES OF ROCKVILLE EASTER SEAL TREATMENT CENTER

The Easter Seal Treatment Center in Rockville, Maryland, finds that from time to time questions arise about the services it offers, and who may use them.

Because the Easter Seal Center is the facility operated by the Society for Crippled Children and Adults in Montgomery County, its primary purpose is to serve Montgomery County residents and Montgomery County doctors. This means that any doctor, no matter where he lives or practices, may refer a Montgomery County patient for treatment, and that a doctor practicing in Montgomery County may refer a patient regardless of where the patient lives.

The Easter Seal Treatment Center accepts patients without restrictions as to age, cause of the disability, ability to pay full fee, or length of residence in the County.

The services available are physical therapy (including Hubbard tank treatments), speech therapy (which is medically oriented and with diagnostic teaching where needed), training in activities of independent living, a nursery group for preschool training of handicapped children, summer swim therapy in an outdoor pool, psychological testing, and a scholarship for summer camping. There is close coöperation with the free diagnostic clinics of the Montgomery County Health Department, with the Special Education Department of the Montgomery County School Board, and with the parochial and private schools in the County.

No patient is accepted without a doctor's written referral, and all remain under doctors' supervision. Treatment is terminated only on the doctor's orders or with his permission.

The Easter Seal Treatment Center is a voluntary health agency and is not supported in any way by the governments of Montgomery County and the State of Maryland. It is governed by a Board of Trustees; the medical policies and practices are the concern of the Medical Advisory Board, composed of Drs. John Kneipp, Robert E. Moran, William Peeples, Gordon Rosenberger, Miriam Pauls and Mr. Ernest Kipnis.

For the past 2 years it has occupied its own modern building, air-conditioned and fully equipped, at 1000 Twin-Brook Parkway, Rockville, Maryland. Call Mrs. Arnold Miles, Director, at Garden 4-5200, for referral forms or for further information.

Meetings

The Fourth Annual Northern Virginia Cardiac Symposium, sponsored by the **Heart Association of Northern Virginia, Inc.,** will be an all-day meeting, Wednesday, April 26, at Holiday Inn on Shirley Highway and South Glebe Road, Arlington.

Dr. Sol Katz, Chief of Medical Service, Veterans Administration Hospital, and Dr. Andrew G. Prandoni, Associate Clinical Professor of Medicine, George Washington University School of Medicine, both members of the D. C. Medical Society, will take part in the program. Dr. Katz will discuss "Cor Pulmonale" and Dr. Prandoni, "Occlusive Disease of the Peripheral Arterial System." From the National Heart Institute will be Dr. Albert Sjoerdsma, whose subject will be "Humorally Mediated Cardiovascular Diseases."

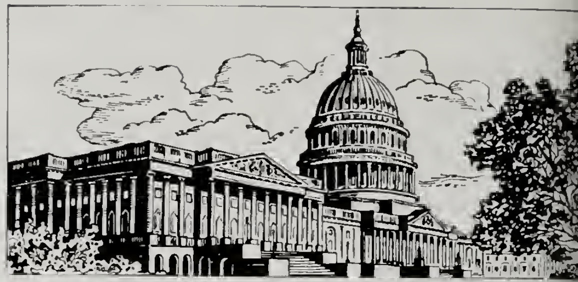
Other prominent speakers from the Eastern Seaboard will be:

Dr. J. Willis Hurst, of Emory University School of Medicine, who will speak on "Pericarditis."

Dr. William Likoff, of Hahnemann Medical College and Hospital, Philadelphia; his subject, "Diagnosis and Management of a Typical Coronary Occlusion."

Dr. Charles K. Friedberg, of Mount Sinai Hospital, New York: "Bacterial Endocarditis."

This program is acceptable for 4 hours' credit, Category I, by the American Academy of General Practice. A copy of the program may be secured from Mrs. Anna C. Van Sickler, Executive Director of the Heart Association, 609 North Edgewood Street, Arlington 1, Va.



NEWS & PERSONA

The District of Columbia General Hospital will observe **National Hospital Day** with a program on Friday, May 12, beginning at 3:00 p.m. There will be 4 discussion groups, appealing to various interests, as follows:

1. Research and Education Programs at District of Columbia General Hospital.
2. Group Planning for Patient Care.
3. Counseling and Guidance in the School of Nursing.
4. The Aging.

A tour of the Hospital and a reception will conclude the program. Members of the Medical Society are cordially invited to attend.

The Montgomery County Tuberculosis and Heart Association will sponsor its **Third Annual Cardiac Symposium** at the National Institutes of Health, May 17.

The meeting will be opened at 9:15 a.m. by Dr. Luther Terry, Surgeon General of the Public Health Service. The following members of the D. C. Medical Society will participate in the program: Drs. Andrew G. Prandoni, John O. Nestor, Clayton B. Ethridge, Joseph Rose, and Thomas W. Mattingly. Guest speakers will also include: Dr. R. J. Bing, Wayne State University College of Medicine; Dr. Robert P. Grant and Dr. Louis Gillespie, of the National Institutes of Health; Dr. Hadley Conn, Jr., University of Pennsylvania Hospital; and Drs. Thomas Stamey, Richard Ross, J. Michael Criley, and Robert Gaertner, all of Johns Hopkins University.

A copy of the program may be secured from the Association, 3746 Howard Avenue, Kensington, Md., telephone Lockwood 4-6050.

Dr. Margaret Mead, Associate Curator of Ethnology, American Museum of National History, New York, will be the guest speaker at a meeting of the **Anthropological Society of Washington,** May 23. Her address on "Theory and Methodology in the Study of Human Behavior" will be given at the U. S. National Museum, 10th Street and Constitution Avenue, Room 43, at 8:15 p.m. Physicians and other interested persons are invited.

General News

Dr. James W. Watts, Chairman, presided at the meeting of the **Executive Board of the Medical Society of the District of Columbia** on February 27.

In a memorandum to the Board, the Secretary offered to make available to the Society his books on socioeconomics as the nucleus for a collection of books in that field. If space in the library were allocated to it, the collection would be available equally to the students of the 3 medical schools, George Washington, Georgetown and Howard. Chairman Watts appointed a committee, to consist of Dr. Raymond T. Holden, Chairman, Dr. James S. Dryden, and Dr. Josephine E. Renshaw, to study the Secretary's proposal and make a recommendation.

Dr. Frank S. Pellegrini, Chairman of the Society's Committee on Public Policy; Dr. Holden, senior delegate to the American Medical Association; and Theodore Wiprud, Secretary of the Society, were selected by President Stubbs, and approved by the Board, to represent the Society at the American Medical Association's Medical Legislative Conference, to be held in Chicago, March 18 and 19. This will be a national meeting to consider the Administration's proposed Health Bill, H.R. 4222, to amend Title II of the Social Security Act to provide health care benefits for the aged, and other related matters.

President Stubbs submitted the following appointments to committees, which were approved by the Board:

Dr. John W. McTigue, to the Committee on Rehabilitation

Dr. Paul Chodoff, to the Committee on Medical Care

PATRON AND FOUNDER OF MEDICO

DR. PETER D. COMANDURAS (right), co-founder and Secretary-General of MEDICO, visited DR. ALBERT SCHWEITZER, Honorary Patron of MEDICO, at his hospital in Lambarene, Gabon, while on a world-wide survey tour. Dr. Comanduras is an Active member of the Medical Society of the District of Columbia. (Reproduced, by permission, from the original photograph which appeared in the February, 1961 issue of *Report from MEDICO.*)

Dr. William G. Battaile, to the Classification Committee.

Dr. William H. Beard and Dr. Roland B. Scott were nominated to succeed themselves as representatives of the Society to the Hospital Service Agency, to serve for a term of 3 years.

Approval was given to the selection of Dr. Harold M. Hobart, Chairman of the Subcommittee on Child Welfare, as the Society's representative to the Eighth National Conference on Physicians and Schools in Chicago, March 9–11, 1961.

A motion was approved that Dr. Janet Travell, Physician to the President of the United States, be recommended to the Society for Honorary membership at the Annual Business Meeting in November.

The Board approved the endorsement of Mr. Paul Foley, Deputy Director of the D. C. Department of Occupations and Professions, to succeed Mr. Robert F. Cogswell, the present Director, whose resignation will become effective, June 30, 1961.

Over 400 high school students participated in the third annual **High School Heart Research Program** this year, a unique project sponsored by the **Washington Heart Association.** Students participating in the program came from the public, private and parochial schools of the District of Columbia.

The program consisted of a series of 3 Saturday morning classes, held in the D. C. Medical Society's auditorium, and a tour of one of Washington's medical research laboratories. Medical centers which coöperated in the program were Georgetown, George Washington and Howard University Schools of Medicine, Mt. Alto Veterans Hospital, and the National Heart Institute.

At the conclusion of the course, examinations were held and the top 10 ranking students received scholarships for work in local medical research laboratories during July and August.

Lecturers for the program were Dr. Gordon Tompkins, of the National Institutes of Health; Dr. Harold Schnaper, of Georgetown University School of Medicine; and Dr. Adrian Hogben, of George Washington University School of Medicine.

Dr. Andrew G. Prandoni, of George Washington, is Chairman of the project. Other members of the sponsoring committee are: Dr. Lawrence S. Lilienfield, of Georgetown; Mrs. Opal Weida, instructor at Ballou High School; Dr. Edward D. Freis, of Veterans Administration Hospital; Dr. Walter M. Booker, of Howard; the Reverend Hugh Monmonier, of The Priory School; Dr. Edward J. Leonard, of the National Heart Institute; and Mr. Keith Johnson, Supervising Director of Science, D. C. Public Schools.

Three new divisions in the Bureau of State Services of the Public Health Service have been recently established, namely, Accident Prevention, Chronic Diseases, and Community Health Practice.

The new division of Community Health Practice, with Dr. James K. Shafer as its chief, will support research to find ways of improving public health practices and medical care administration; assist states and communities in strengthening migrant health, metropolitan, school and other health services; and administer traineeship programs to increase the quality and supply of public health manpower.

The Accident Prevention Division, headed by Dr. Albert L. Chapman, will seek to develop and improve local accident prevention work, particularly in relation to highway safety, home accidents and accidental poisonings.

Dr. Leslie W. Knott will head the division of Chronic Diseases, which will deal with the prevention and control of cancer, diabetes, arthritis, heart disease, deficiencies of sight and hearing, and will focus especially on health problems of the aged.

Many of the functions described above were performed by the Divisions of General and Special Health Services, which have now been abolished.

Mr. Jim Reed, Editor of *The AMA News*, has assumed the added position of Director of Press Relations of the American Medical Association, succeeding **Mr. John L. Bach,** who has been promoted to Assistant Director of the Department of Scientific Assembly, a newly created post. **Mr. Ken David,** formerly with United Press and western newspapers, has joined *The AMA News* staff as Executive Editor.

Mr. Douglas R. Smith, President of the National Savings and Trust Company, has been appointed to the **Board of Trustees of Group Hospitalization, Inc.,** to complete the unexpired term of the late Bruce Baird. Mr. Smith is also Treasurer of Medical Service of the District of Columbia. He succeeded the late Mr. Baird as President of National Savings and Trust Company last October.

Mr. Harold D. Fangboner, Assistant Vice President of the Chesapeake and Potomac Telephone Company, has also been appointed to the Board of Trustees of GHI to complete the unexpired term of the Honorable Joseph H. Himes, who died September 9, 1960. Mr. Fangboner has been active in civic affairs for many years.

Dr. Joseph S. Costa, psychiatrist on the staff of the District General Hospital since 1958, was honored by the Junior Chamber of Commerce on March 2 as the "outstanding young man in the District Government." He received the annual Melvin C. Hazen Award for his work in developing and coördinating a rehabilitation program for narcotics addicts. Dr. Costa is a graduate of Georgetown University School of Medicine.

Dr. Janet Travell, Personal Physician to President Kennedy, has accepted an appointment to the staff of **George Washington University School of Medicine** as Associate Clinical Professor of Medicine.

Mr. Fred A. McNamara has been elected **President of the Hospital Council of the National Capital Area.** He recently retired as chief of the hospital branch of the Budget Office for the District of Columbia.

Personals

Rear Admiral Bartholomew W. Hogan, M.C., U.S.N., retired as Surgeon General of the Navy and Chief of the Bureau of Medicine and Surgery, February 28, after 35 years of distinguished service in the Medical Corps of the Navy. He has accepted the position of Assistant Director of the American Psychiatric Association, which has offices in Washington.

Secretary of the Navy, the Honorable John B. Connally, Jr., presented the Navy's Distinguished Service Medal to Rear Admiral Hogan during retirement ceremonies at the National Naval Medical Center in Bethesda, Maryland. The citation accompanying the award read in part:

> "For exceptionally meritorious service to the Government of the United States in a duty of great responsibility as Chief, Bureau of Medicine and Surgery, and Surgeon General of the Navy, from February 1955 to February 1961. During this period, Rear Admiral Hogan established new objectives in all branches of Navy medical practice, patient care, and internship and residency training. Among his many accomplishments, he initiated significant changes which doubled the size and scope of the Navy's internship and residency training programs and raised the standards of training to a par with any in the United States, resulting in new plateaus of respect and rapport for Navy medicine among civilian doctors in the United States and throughout the world. The increased residency training opportunities, as well as improvements in morale, directly attributable to Rear Admiral Hogan's outstanding leadership, ability, and astuteness, have resulted in a reduction of approximately 50 per cent in the annual turnover of Navy doctors."

A survivor of the 1942 sinking of the aircraft carrier *Wasp*, Rear Admiral Hogan holds the Silver Star, Navy and Marine Corps Medal, and the Purple Heart.

DISTINGUISHED SERVICE MEDAL TO
REAR ADMIRAL HOGAN

REAR ADMIRAL BARTHOLOMEW W. HOGAN, M.C., U.S.N. (right), retiring Surgeon General of the Navy, receives the Distinguished Service Medal and citation from THE HONORABLE JOHN B. CONNALLY, JR., Secretary of the Navy, at special ceremonies in his honor, February 28, at the National Naval Medical Center in Bethesda, Md.

A portrait of Rear Admiral Hogan was commissioned by the Navy Medical Historical Society and presented to the Navy as a gift. It will hang in the Stitt Library.

Rear Admiral Hogan is an Honorary member of the D. C. Medical Society. A reception for him and Mrs. Hogan, attended by more than 600 Government officials and friends, was held at the Officers' Club of the National Naval Medical Center, February 13.

Recently the Medical Board of the Royal Swedish Armed Forces presented its crown-crested plaque to Rear Admiral Hogan in appreciation of the study tours arranged for Swedish medical officers and for the assistance given by numerous American medical officers who have visited Sweden.

Dr. Brian Blades, Professor and Head of the Department of Surgery at George Washington

CALENDAR OF SPEAKERS

The following members of the Medical Society of the District of Columbia have addressed lay groups during the past several weeks. The Society maintains a Speakers Bureau, sponsored by the Committee on Public Information and Education, through which requests for speakers for lay groups, including radio programs, can be filled.

Date	*Speaker*	*Subject or Title*	*Organization*
February 15	Dr. Julius S. Piver	Cancer in Women	Kiplinger Newsletter Employees
March 7	Dr. Charles P. Ryland	Medical Bureau: How It Functions and What Its Problems Are	Inga's Angle, WRC-TV
March 14	Dr. Clifton R. Brooks	Problems of the Adolescent	Inga's Angle, WRC-TV
March 16	Dr. John D. Schultz	The Aged in the Community	Memorial Lecture Program, Jewish Community Center
March 21	Dr. R. Lomax Wells	Industrial Medicine	Inga's Angle, WRC-TV

University, received the Distinguished Alumni Award of the Washington University, in St. Louis, during the University's Founders' Day ceremonies in February. His citation noted his contributions to medical science and education. In addition to the citation the Award included an official University chair inscribed to him. Dr. Blades graduated in medicine from Washington University in 1932.

Dr. Charles S. Coakley, Chief of Anesthesia at George Washington University Hospital, was inaugurated, March 11, as President of the Southern Society of Anesthesiologists during its annual meeting in Jackson, Miss.

Dr. Anna Bartsch-Dunne, gynecologist and proctologist, was one of 3 Howard University graduates in the Washington area who received Alumni Achievement Awards, March 2, at the 94th anniversary of its founding. Dr. Dunne graduated from Howard in 1902 and served from 1916 to 1932 on the Medical School faculty successively as Associate Professor of Histology, Associate Professor of Physiological Chemistry, and Assistant Professor of Obstetrics, in addition to maintaining a private practice. She is a Life member of the D. C. Medical Society and Past President of the Women's Medical Society of the District of Columbia.

The Washington Academy of Surgeons, at its meeting, February 13, honored 12 physicians who have maintained membership in the Academy for more than 25 years. Honorary memberships were confirmed upon them by Dr. Luther W. Gray, President of the Academy. The honorees included **Drs. Edward A. Cafritz, Benjamin F. Dean, Frederick C. Fishback, Alec Horwitz, John H. Lyons, Robert E. Moran, W. Ross Morris, George K. Nutting, Paul S. Putzki, Arch L. Riddick, Fred R. Sanderson, and J. Ogle Warfield.**

Dr. Edward Lewis, Clinical Professor of Pediatrics, and **Dr. Ralph G. Beachley,** Clinical Professor of Public Health Practice, were named Professors Emeriti at the Winter Convocation of George Washington University, held in the Lisner Auditorium, February 22. The titles were confirmed upon them by President Thomas H. Carroll, who presided over his first convocation as President of George Washington University. Dr. Lewis is a Life member of the D. C. Medical Society and Dr. Beachley is an Associate member.

Dr. William P. Argy, Medical Director of the D. C. Society for Crippled Children, was awarded a certificate by the National Capital Girl Scout Councils in recognition of his sponsoring and founding the first Senior Girl Scout troop for handicapped children in the Washington area. The 6 members of the troop, all afflicted with cerebral palsy, range in age from 14 to 23 years.

Dr. George E. Schreiner was elected Chairman of the Nominating Committee of the Southern Society for Clinical Research at its annual meeting in New Orleans, La., January 19–21, 1961. **Dr. Laurence H. Kyle,** retiring president of the Society, delivered his Presidential Address on the subject, "Structure and Function of Clinical Research Societies."

Dr. John J. Canary was elected to the Council of the Southern Section of the American Federation for Clinical Research, which held its meetings concurrently with the Southern Society for Clinical Research.

Theodore Wiprud, Executive Director of the Medical Society of the District of Columbia and Managing Editor of the MEDICAL ANNALS, has been appointed Chairman of the 1961 State Medical Journal Conference, which will meet in Chicago at the Sheraton Towers, October 30 and 31. Mr. Wiprud is a member of the Advisory Board to the State Medical Journal Advertising Bureau.

Drs. John R. Cavanagh, Robert J. Coffey and Andrew G. Prandoni received papal honors for service to the Roman Catholic Church in a ceremony at the Apostolic Delegation, January 28. Raised to the rank of Knights Commander of the Order of St. Gregory the Great, they were cited by Archbishop Egidio Vagnozzi, Apostolic Delegate to the United States, for having been "very generous with their professional skills" in the service of the Church and the Apostolic Delegation.

The following Active members of the D. C. Medical Society participated in the weekly programs of Inga's Angle over WRC-TV during the fall and winter months: **Drs. Thomas L. Auth, Lester S. Blumenthal, Warren D. Brill, Samuel Dove, William T. Gibb, Murdock Head, William L. Howell, Charles A. Hufnagel, Oscar B. Hunter, Jr., Eloise W. Kailin, Paul C. Kiernan, Marvin C. Korengold, Robert T. Morse, Herbert P. Ramsey, Hugo V. Rizzoli, Lawrence J. Thomas, Francis Threadgill, A. Earl Vivino, and Paul R. Wilner.**

Dr. Charles E. Bickham, Jr., has been elected a Fellow of the American College of Radiology. Investiture into Fellowship was made on February 10 at the Drake Hotel in Chicago during the annual meeting of the College.

Dr. Charles E. Law, of Alexandria, Va., was elected Treasurer of the Northern Virginia Society of Internal Medicine on January 17.

Mr. F. Royce Franzoni has been appointed to the new Executive Committee on National Formulary by the Council of the American Pharmaceutical Association.

Dr. Henry P. Laughlin has been named Vice President for Finance and Director of a new book publishing company, Robert B. Luce, Inc., which has opened offices at 1816 Jefferson Place, N.W.

All three are Associate members of the D. C. Medical Society.

Membership

The following applicants for membership were duly elected to membership by the Executive Board, February 27, 1961, in accord with Chapter II, Article VIII, of the Constitution and By-laws of the Society.

Active Members

Lewis K. Atkinson, 117 Oglethorp Street, N.W.
Bettie I. Graves Clark, 2851 Brentwood Road, N.E.
Arthur Egelman, 3246 P Street, N.W.
Alfred J. Luessenhop, Georgetown University Hospital
Herbert A. Moskovitz, 1712 Eye Street, N.W.
Sheridan L. C. Perry, 4800 17th Street, N.W.
Helene G. Werner, 3036 Klingle Road, N.W.

Associate Members

James M. Clements, 4413 Farraday Place, N.W.
Thomas C. Knechtges, Armed Forces Institute of Pathology
Ella L. Rivat, 3726 Connecticut Avenue, N.W.

The following applicants for membership were elected to Active membership by the Executive Board, December 20, 1960:

David A. Lanham, 3000 Connecticut Avenue, N.W.
Ahmet M. Ozbey, Columbia Hospital
Irving M. Ryckoff, 1615 Holly Street, N.W.

Correspondence

WASHINGTON, D. C., February 24, 1961

TO MR. WIPRUD:

The Board of Directors of the Graduate Nurses' Association has authorized the private duty nurses to charge $20.00 for 8-hour service on all types of cases and all tours of duty beginning March 15, 1961.

The charge for 12 hours (to be done only in an emergency) will be $30.00.

Sincerely,
EDITH M. BEATTIE, R.N.
Executive Secretary,
Graduate Nurses' Association

WASHINGTON, D. C., March 3, 1961

TO THE EDITOR:

This letter is directed to doctors who are more than 50 years of age, and who have been residents in the District of Columbia for 35 years. They are eligible to demonstrate their patriotism and civic pride by applying for membership in the Oldest Inhabitants' Association.

This body was founded in 1865, directly after the Civil War, and it has met regularly each month, on the first Wednesday, since that date.

Its present enrollment is more than 450, and is composed of the solid, substantial citizens of Washington who are interested in its welfare. The advice and counsel of the Association is sought and carefully considered by the Congress in formulating laws by which the City is governed, and for many years it has been an honored and influential guide in its deliberations.

The meetings are conducted in the Board Room of the National Security and Trust Building, and each is addressed by a renowned speaker on a topic concerning Washington and its affairs. Good fellowship abounds, and the educational result is beneficial. A membership card is an endorsement of good citizenship.

At the present time there is a paucity of medical representation, which should be corrected. Mature physicians do not have to be reminded of the necessity of medical participation in civic activities, and this letter is addressed to you. If you will communicate with me, I will forward application blanks. By the way, the initiation fee is $5.00, and the dues are $5.00 a year. My address is: 2121 Massachusetts Avenue, N.W.

JAMES A. GANNON, SR., M.D.

Obituaries

ROBERT B. BACON, LL.B., M.D.

(1872–1961)

Dr. Robert B. Bacon, a Life member of the Medical Society of the District of Columbia, died, January 24, 1961, after a long illness, in the home of his daughter, Mrs. Donald M. Weirich, of 1905 Little River Turnpike, Fairfax, Va. He was one of the oldest members of the Medical Society.

Born in Brooklyn, N. Y., May 5, 1872, Dr. Bacon was the son of two physicians, Drs. James and Margaret Bacon. His mother, a graduate of Women's Medical College in Philadelphia, was one of the first women doctors in the United States. The family moved to Baltimore where she practiced medicine with her husband.

Dr. Bacon attended Gonzaga College in Baltimore, and received his degree in medicine from the College of Physicians and Surgeons of the University of Maryland in 1893. In 1908 Dr. Bacon earned the degree of Bachelor of Law, also from the University of Maryland.

Dr. Bacon began practice in the District of Columbia in 1906. He was on the visiting staffs of Sibley Memorial Hospital, Prince George's General Hospital, in Cheverly, Md., and Leland Memorial Hospital, in Riverdale, Md. He practiced for more than 40 years.

He was a member of the Baltimore City Medical Society, the Medical and Chirurgical Faculty of Maryland, and the American Medical Association. He was elected an Active member of the Medical Society of the District of Columbia in 1915 and was placed on the roll of Life members in 1955. He was a former member of the Knights of Pythias.

He retired to Florida after the death of his wife, Mrs. Mary Theresa Bacon, in 1950. He returned to the Washington area a year ago to live with his daughter, who is the closest surviving relative.

MAYNARD IRVING COHEN, A.B., M.D.

(1915–1961)

Dr. Maynard I. Cohen, Chief of Pediatrics at the Washington Hospital Center, died suddenly, January 11, 1961, while attending a pediatrics meeting in Arlington, Va.

Dr. Cohen was born in Wilkes-Barre, Pa., February 2, 1915, to the late Joel Cohen and to Gussie Frankel Cohen, who survives him. He attended the Wilkes-Barre Academy and the Wyoming Seminary, in Kingston, Pa., before entering Harvard College, where he received his A.B. degree. He received his degree in medicine from Johns Hopkins University in 1940, following which he interned at Sydenham Hospital in Baltimore and trained in pediatrics at the Babies Hospital of the Columbia-Presbyterian Medical Center in New York City.

During World War II he served in the Navy with the rank of Lieutenant Commander. He was on duty for four years. At the War's end, he came to Silver Spring and was active in private practice until the time of his death.

Dr. Cohen was licensed to practice in the District of Columbia in 1946. In addition to heading pediatrics at the Washington Hospital Center, he was on the pediatric staffs of Children's, Sibley Memorial, George Washington and Doctors Hospitals. He was on the teaching staff of George Washington University School of Medicine.

He was a diplomate of the American Board of Pediatrics and a Fellow of the American Academy of Pediatrics. He was elected to Active membership in the Medical Society of the District of Columbia in 1947 and was transferred to Associate in 1952 after he had joined the Montgomery County (Maryland) Medical Society. He belonged to the Woodmont Country Club and was on the board of the Washington Hebrew Congregation.

In addition to his mother, he leaves his wife, Mrs. Phyllis Hagedorn Cohen, and four sons, Lawrence, Alan, Robert and Bruce, all of the home address, 7214 Rollingwood Drive, Chevy Chase, Md. He also leaves a brother, Joel Cohen, of Rockville, Md., and two sisters, Mrs. Stanley Weiss and Mrs. Marvin Judd, both of Wilkes-Barre, Pa.

Clinical Arteriography—Lawlah et al.

(Continued from page 208)

laboratory. These findings indicate that this, usually remediable, syndrome is far more common than was formerly suspected.

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Chloraderm as a Dermatologic Agent—Freeman et al

(Continued from page 214)

observed. The anesthetic effect was marked, bringing immediate relief from pruritus, while clinical improvement was usually noted within a week of treatment.

Bacteriologic studies in vitro and in vivo demonstrated Chloraderm to be an excellent germicidal, fungistatic and antipruritic preparation.

We admit that the material herewith presented is both limited and small. However, for the type of conservative use intended, it is our considered opinion that this preparation is a safe and effective dermatologic agent.

The Chloraderm Solution and Ointment used in this study was supplied by the Chloraseptic Company of Washington, D. C.

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Hereditary Ectodermal Dysplasia—Epps, Perry and Scott

(*Continued from page 227*)

The major clinical characteristics of the disease include a flattened bridge of the nose; full lips; soft, thin skin; hair that is sparse, fine and short; poorly developed, peg-shaped or absent teeth; and abnormalities of the nails, lacrimal glands and mucous secreting glands. The disease must be differentiated from congenital syphilis, avitaminosis, Werner's syndrome, Rothmund's syndrome and the Hutchinson-Gilford type of progeria. The treatment as outlined above is essentially palliative and symptomatic.

Acknowledgments: Dr. Marvin A. Jackson, Assistant Professor of the Department of Pathology, Howard University, gave helpful assistance in the preparation of the pathologic data. Dr. Coleman R. Tuckson, Associate Professor of Oral Surgery, Howard University College of Dentistry, performed the dental examinations and reviewed the X-ray films.

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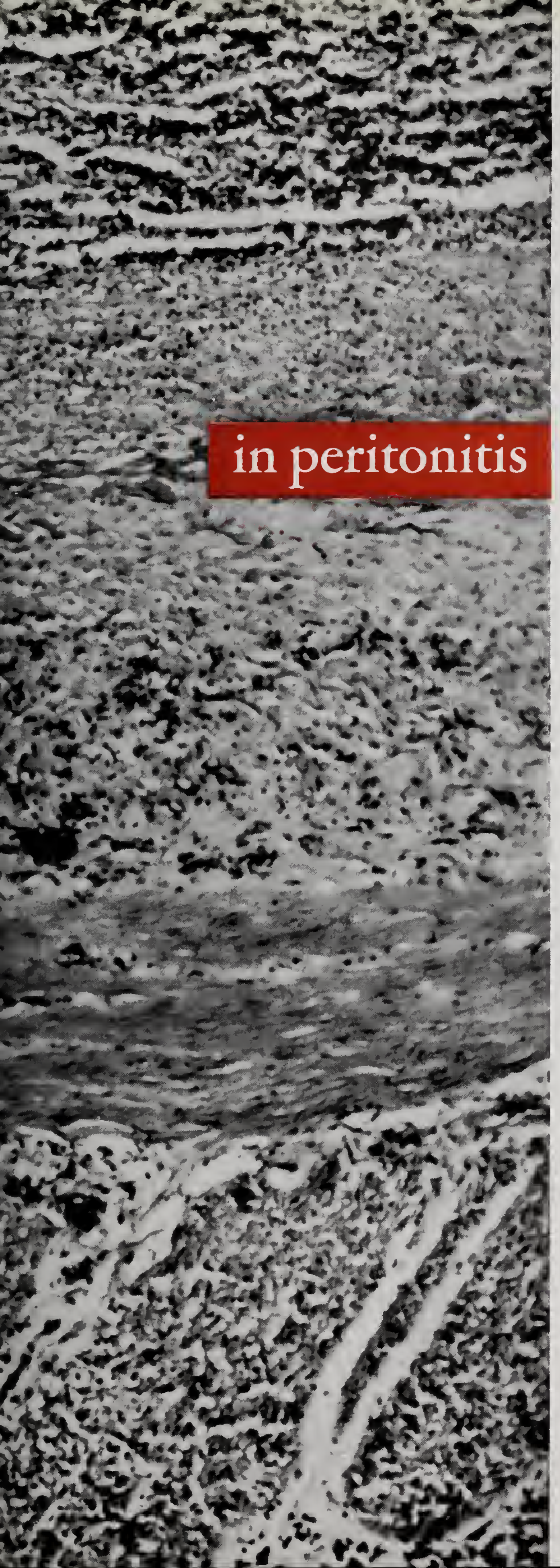
Treatment for Emotionally Disturbed Children

(*Continued from page 242*)

the treatment of disturbed children, and its board invited Children's House, then located in Bethesda, and the Washington Institute of Mental Hygiene, then on Columbia Road, to share the Hillcrest buildings. Since 1953, and until the present merger, they have operated under one roof but as separate organizations.



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Albamycin also has a relatively low order of toxicity. In a certain few patients, a yellow pigment has been found in the plasma. This pigment, apparently a metabolic by-product of the drug, is not necessarily associated with abnormal liver function tests.

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BOOK REVIEWS

Rypins' Medical Lincensure Examinations—Topical Summaries and Questions, 9th ed. WALTER L. BIERRING, M.D., M.A.C.P., M.R.C.P., Edin. (Hon.). With the collaboration of a Review Panel. Price, $11.00. Pp. 805. Philadelphia: Lippincott, 1960.

The first edition of this volume was published in 1933, and I feel certain that almost all physicians are well acquainted with one or more of these volumes since that date

This book presents a compact, concise and orderly presentation of the various fields of medicine as an aid in reviewing for medical licensure and other examinations. It has been thoroughly revised and updated by Dr. Bierring with the aid of 14 outstanding teachers and clinicians.

The text is divided into two sections, the Basic Sciences and the Clinical Sciences, and these are subdivided into various sub-sections.

This volume covers the ground exceptionally well and should be of great help to the medical graduate preparing for his state board examinations. I recommend it highly.

I. PHILLIPS FROHMAN, M.D.

The Medical Assistant. A Guidebook for the Nurse, Secretary, and Technician in the Doctor's Office. MIRIAM BREDOW. Price, $7.50. Pp. 430. New York: McGraw-Hill (Blakiston Division), 1958.

This volume touches upon nearly all duties performed by a doctor's office assistant. Broadly, these include many facets of office nursing and secretarial work.

The need for such a guide is emphasized because there are only a handful of schools which train assistants. As a matter of fact, the demand is far greater than the supply. The purpose of the book, then, is primarily to lessen the doctor's burden in training an office assistant.

As indicated above, the book covers a wide field, including such subjects as the role of the assistant in public relations; how to assist with the examination of patients; the principles of medication; technics of injections; first aid rules; secretarial duties; and the handling of patients' and doctors' financial records.

Mrs. Bredow has done a thorough job and has covered her subjects well. This book should be in the library of every doctor's office.

T. W.

The Senescent in Industry: Medical Evaluation of His Employability and Health Maintenance. GEORGE C. DOWD, M.D. Pp. 94. Published under a grant from the American Geriatrics Society, 1960.

In this small book the author briefly discusses the factors and conditions encountered by the industrial worker as he grows older. He challenges the economic value in the practice of requiring retirement of all at a specific age. Conditions of hiring which prevailed in 1914, when Civil Service selected 65 years as the retiring age in order to give the youth more opportunity for employment, have shifted economically from a basically rural to an urbanized, industrialized economy. Medical science and regulation of housing facilities have contributed materially to prolonging the lives and health of the workers. The problem at that time was to help youth find employment, while today the problem is to keep the able-bodied 65- and 70-year-old workers productively employed.

He challenges the worth of many of the reasons given for retiring the aging. Most of these he finds baseless and indefensible. He argues that it would be far more economic to abolish the arbitrary retiring age and continue the workers at their jobs subject to periodic physical and mental examinations.

Surveys are showing that more than half of those required to leave their employment at 65 years are physically and mentally capable of continuing their productive occupations. A misleading comment is frequently offered that the financial status of the retiree is comforting in that he will carry with him health insurance and medical care, but it should be added that the expense of annual premiums will be incurred to keep them in force. With no employment he cannot long be expected to meet such expense. The economic loss in such arbitrary unemployment can become tragic.

The various factors and senescent influences acting upon the aging are discussed and a form for reporting results of examination is offered. In support of this proposition there is given the program offered by the National Advisory Committee on Industrial Employment of Older People.

There is also included a form prepared by the American Geriatrics Society for Job Demand—Physical Capacity Evaluation Survey together with code numbers for disability classification.

The author includes 2 valuable papers of his own, "Physiologic Rehabilitation of the Arteriosclerotic Worker for Industry" and "Recommendations for Medical Standards for Motor Vehicle Drivers."

JOSEPH S. LAWRENCE, M.D.

Modern Occupational Medicine, 2nd ed.—thoroughly revised. Editors: A. J. FLEMING, M.Sc., M.D., F.A.C.P., AND C. A. D'ALONZO, M.D., F.A.C.P. Associate Editor: J. A. ZAPP, Ph.D. Price, $12.00. Pp. 587, with 66 illustrations and 1 color plate. Philadelphia: Lea & Febiger, 1960.

(Continued on page 42)

Why Homer Jackson's work is important to you…

Talking on the radio-telephone is Homer "Bud" Jackson, both a scientist and a hard-working buyer for a company processing Florida oranges into frozen juice concentrate.

He has just made a decision that's important to you. He has analyzed some sample oranges from the grove in the background and found that they have the optimal amount of sugar, of acid, and are of the proper texture. (Testing for vitamin C comes later.) Homer Jackson knows that these oranges are of a quality to meet the exacting regulations required by the Florida Citrus Commission.

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It's good nutrition to encourage pe ple to drink orange juice. It makes goo sense to persuade them to drink orang juice that you *know* tastes good, has th right sugar-acid ratio, and is packed fu of nutritionally important vitamin C.

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Book Reviews

(*Continued from page 40*)

The authors' second edition has indeed been "thoroughly revised." Three fundamentally important new chapters have been added dealing with occupational chest disease, safety education, and emotional illness in the industrial environment. A section on biostatics is completely new and effectively presented. The revisions effected in the old chapters, along with the completely new, succeed in making this second edition much more useful as a textbook or reference book for physicians, medical students, nurses, and management. The thoughtful student of occupational medicine will be pleased with this new volume.

R. Lomax Wells, M.D.

A System of Medical Hypnosis. Ainslie Meares, M.D., B. Agr. Sc., D.P.M. Price, $10.00. Pp. 484. Philadelphia: Saunders, 1960.

This is one of the best books on hypnosis to be published in many years. It is also a much needed book—one which should do much to put the current hypnosis boom into proper medical perspective.

Dr. Meares writes from the broad standpoint of a practicing eclectic psychiatrist of many years' experience. Although he describes the technics of induction in exhaustive detail, the major emphasis is on the psychodynamics of the hypnotic state. "The object," the author states, "has been to offer the student, the practitioner, and the psychiatrist-in-training a guide to medical hypnosis which is essentially practical, but which at the same time clearly relates the clinical procedures to the underlying psychodynamic principles."

There are five main headings: (1) The Nature of Hypnosis, (2) The Induction of Hypnosis, (3) Suggestive Therapy, (4) Hypnoanalysis, and (5) Hypnosis in General Medicine. There is an excellent section on methods of establishing rapport during the first interviews. Another section deals with the interesting clinical aspects of Yoga, which he calls the Y-State, an hypnotic variant. The author always performs a physical examination on each potential patient to determine his susceptibility to suggestion. Curiously enough, he recommends that the patient be asked to disrobe to encourage a greater degree of relaxation.

The complications, contraindications, and dangers of hypnosis are discussed, but Meares does not seem to be as alarmed about the dangers as are some of his American colleagues. Although he takes pains to recommend psychotherapy whenever a patient develops anxiety after symptom-removal by hypnosis, the author seems to have had little difficulty with such patients. For example, there is no mention of the psychotic reactions which sometimes result from the sudden and injudicious "cure" of hysterical aphonia or neurodermatitis by hypnotic means.

The book is logically organized and written in an easy-flowing English style which makes it a pleasure to read. There is a selected bibliography, a useful glossary, but, unfortunately, an incomplete index. This book can be safely recommended to all physicians interested in hypnosis.

Zigmond M. Lebensohn, M.D.

Diabetic Care in Pictures—Simplified Statements with Illustrations Prepared for the Use of the Patient, 3rd ed. Helen Rosenthal, B.S., and Joseph Rosenthal, M.D. Price, $4.50. Pp. 237, with 137 illustrations (including 12 in color). Philadelphia: Lippincott, 1960.

This new edition of an old standard, diabetic primer does not greatly improve the readability or understandability of the past ones. A chapter has been added on the use of oral hypoglycemic agents.

Very little need be said regarding this volume. It is simply written, profusely illustrated, and fairly nontechnical, making it worthy of recommendation to the average diabetic patient.

Stanley W. Kirstein, M.D.

Ciba Foundation Symposium on Cellular Aspects of Immunity. G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P., and Maeve O'Connor, B.A., Editors for the Ciba Foundation. Price, $10.50. Pp. 495, with 117 illustrations. Boston: Little, 1960.

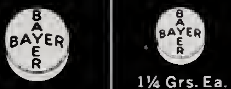
This is the carefully edited proceedings of the Ciba Foundation Symposium on "Cellular Aspects of Immunity," participated in by 32 scientists from all over the world, all authorities in their respective fields.

It is a well constructed book of 495 pages, including the index. The illustrations are well chosen and reproduced, especially in the 2 contributions, "The Micro cinematographic Contributions to the Study of the Plasma Cell" by Thiéry and "The Comparative Histopathological Study of Delayed Hypersensitive Reactions" by Waksman.

One can go to this volume with great confidence for it appears to be the last word in this highly specialized field. The theme of the Symposium appears to be to establish that the immunologic competent cell rather than the antibody has become the central theme of immunology.

This excellent volume will, of course, have a limited appeal, but it would be invaluable to those who are working in immunology and allied research activities.

J. E. Ash, M.D.



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BOOK REVIEWS

Resuscitation of the Newborn Infant. Edited by Harold Abramson, M.D. Price, $10.00. Pp. 274, illustrated. St. Louis: Mosby, 1960.

This is an excellent presentation of a vast amount of knowledge and research concerning the approaches of interest to the many disciplines involved in "the story of resuscitation of newborn infants—what we know and what we do not know." The aim of this book is to bring to the practitioner an organized concept of the respiratory difficulties and related problems of the newborn to serve as a practical guide in meeting urgent situations which arise in the first few hours of life.

The editor is a pediatrician, and the contributors to the book include anesthesiologists, internists, pharmacologists, obstetricians, public health officials (administration, maternal and newborn, statistics), and laboratory workers, pathologist, psychiatrist, and nurse.

Attention is directed to underlying conditions leading to late fetal and early infant death. Anorexia is stressed as the primary cause underlying these deaths.

Team work between the family physician and other specialists with early application to the prospective mothers of all available, indicated diagnostic and therapeutic measures will reduce or eliminate occurrence of perinatal distress. This includes consideration of family background, habits, physical status of the prospective mother from social, environmental, biologic, and mental health standpoints, with appropriate anticipatory guidance aimed at preventing reproductive loss.

Diagnosis of fetal distress occupies a prominent place in this problem. The obstetrician, pediatrician, anesthesiologist, and nurse are concerned with the "first 60 seconds of life," during which time a quick appraisal is mandatory as the picture shifts from indirect observation of the fetus during labor to the direct observation of the infant on delivery.

The main objective of treatment of fetal distress is early recognition so that the fetus may be removed from the unfavorable intra-uterine environment as quickly as possible.

Details of the immediate examination of the newborn infant in the delivery room form an excellent guide for the resident and the student as well as a practicable review for the practitioner. The fundamental concepts of resuscitation at this point demonstrate procedures, apparatus, and technics which are life-saving.

The use of drugs, the value of mechanical technics, and the use of laboratory procedures are all items which are given detailed consideration in this book.

Perinatal mortality conferences which include obstetrician, pediatrician, anesthesiologist, pathologist, with the physician, resident staff, nursing staff, biostatistician, and medical-social worker lead to the team approach in the management of the problem of perinatal mortality.

The final chapter presents the search for new and precise knowledge. This search by research teams working in clinics, maternity wards, nurseries, and laboratories will aid the practitioner in his caring for mother and child.

Hugh G. Clark, M.D.

Occupational Diseases and Industrial Medicine. Rutherford T. Johnstone, M.D., and Seward E. Miller, M.D. Price, $12.00. Pp. 482. Philadelphia: Saunders, 1960.

This book is designed for, among others, those physicians who are in fields other than occupational medicine but who are called on from time to time to treat occupational injuries or illnesses. It is designed to acquaint these physicians with the hazards to which workers are sometimes exposed in the industrial environment.

The chapter on Scope and Elements of Industrial Medical Practice clearly defines this field of practice and will be helpful to those not well acquainted with work in this field. It describes the relationship of the occupational physician and the occupational health program to the total community health program. The preventive medicine aspect of occupational medicine is emphasized.

The discussion of the Workmen's Compensation Acts will be beneficial to those who, from time to time, will help to implement the provision of those Acts. There is a table listing the important provisions of each of the various Acts.

With the increasing use of toxic substances in the household, the description of the hazards of these substances will be particularly useful in general medicine. There is also a timely discussion on ionizing radiation, a subject of increasing importance.

Of particular interest in defining the requirements of a worker's job is the glossary of industrial terms, interpreting for the physician some of the technical terms and jargon of the industrial worker.

This is an outstanding book by 2 prominent physicians in the field of occupational medicine and will be a valuable addition to the library of physicians in many fields.

L. A. Pyle, Jr., M.D.

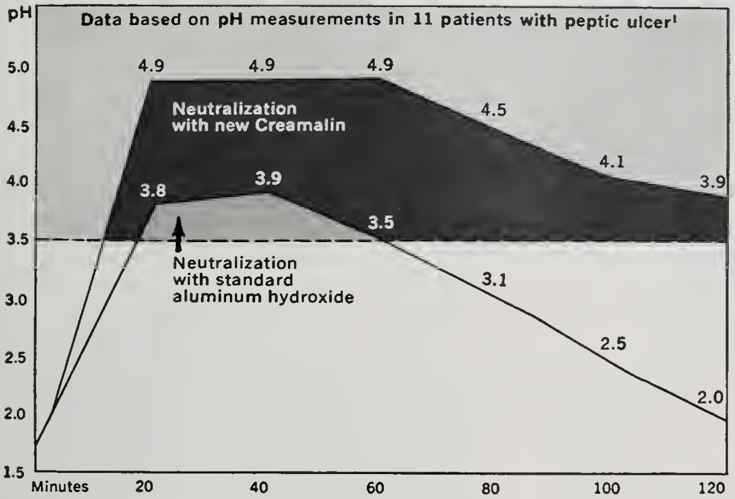
Infectious Diseases of Children, 2nd ed. Saul Krugman, M.D., and Robert Ward, M.D. Price, $13.00. Pp. 398, with 55 illustrations and 7 color plates. St. Louis: Mosby, 1960.

This book should be close at hand to any physician who treats children. Its clear, concise, complete presenta-

(*Continued on page 26*)

At the site of peptic ulcer

Following determination of basal secretion, intragastric pH was continuously determined by means of frequent readings over a two-hour period.



Data based on pH measurements in 11 patients with peptic ulcer[1]

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1. Data in the files of the Department of Medical Research, Winthrop Laboratories. 2. Hinkel, E. T., Jr.; Fisher, M. P., and Tainter, M. L.: J. Am. Pharm. A. (Scient. Ed.) 48:384, July, 1959.

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Book Reviews

(*Continued from page 24*)

tion of the most common infectious diseases makes it invaluable.

The organization of the book is certainly peculiar. Except for the last 2, the chapters are in an alphabetical order of sorts without regard to etiology, symptoms or treatment. Nevertheless, the organization and text of each chapter more than make up for the table of contents. Color plates, black and white illustrations, and tables enhance the well written material on subjects ranging from the common cold to smallpox. Although it was "not designed to be an all-inclusive text on infectious diseases," chapters written by experts on tuberculosis and common fungous and parasitic diseases would improve the usefulness of the book. Typical up-to-date sections of the book discuss the hazards of chloramphenicol in infants and the controversial therapy with adrenal steroids in meningitis.

According to this reviewer, the book would be less confusing without the chapter on aseptic meningitis, which the authors define as "a benign syndrome of multiple etiology. . . . Recovery occurs in about a week and is complete." Since the etiology includes polio, encephalitis, lead poisoning, early tuberculosis, and other potentially fatal agents, diagnosis must be accurate and treatment as specific and vigorous as possible. One can make a diagnosis of "aseptic meningitis" only in retrospect, and no patient when first seen with this syndrome should be expected automatically to make a complete, spontaneous recovery.

Dr. Morris Greenberg's chapter, Control of Communicable Diseases, is a modern classic which dispels many persistent myths as it outlines the logistics of patient care in the hospital and home. This chapter is a fitting conclusion to an excellent text.

George J. Cohen, M.D.

Your Child's Care—1001 Questions and Answers. A new, revised, and enlarged edition of "A Pediatric Manual for Mothers." Harry R. Litchfield, M.D., F.A.C.P., and Leon H. Dembo, M.D. Price, $3.95. Pp. 257. Garden City, N. Y.: Doubleday, 1960.

If taken as a mothers' guide, this book does indeed present a comprehensive, up-to-date handbook for mothers. On the whole, the answers to many problems raised by mothers of young babies are answered quite reasonably.

It must be recognized, of course, that *an* answer may not necessarily be *the* answer, because, according to the authors' statement in the preface, "Your child's health depends to a large extent on full coöperation between you and your doctor and the basis of this coöperation and knowledge." The answers given may not coincide with the individualized answer that the pediatrician would give a specific patient, but these answers form a background for the mother. There are sections devoted to baby-sitters, air travel, television, fluorine treatment, the handicapped child, discipline and punishment, nursery schools, etc., which offer very good guide lines. This book is believed to be one of the useful books of its kind to help with many of the practicable problems faced by the conscientious parent.

There are a few points, however, in which the reviewer would not agree with each item in detail. I would disagree slightly with the authors in some of their views as to early toilet training and what was thought to be a slightly dogmatic approach to the television problem. Most of these problems need some degree of direction by the parents but not complete permissiveness to the will of the child.

This book could well be recommended to pediatric residents, medical students, nurses and parents for some of the practicable problems in child management, and certainly can be a helpful tool to the busy, accomplished practitioner.

Hugh G. Clark, M.D.

Pathology; a Dynamic Introduction to Medicine and Surgery. Thomas Martin Peery, M.D., and Frank Nelson Miller, Jr., M.D. Price (paper), $5.50. Pp. 626. Boston: Little, 1961.

" 'Of what use,' thought Alice, 'is a book without pictures?' " Such was the first thought of the reviewer on paging through this pioneering novelty of a paperback medical text sans illustrations. But there are indeed uses for this comprehensive and well-written outline, intended to serve as lecture notes for the medical student and as a basis of review for the graduate practitioner. The student will be able to supplement such a text with microslides, gross specimens, and (especially if he is one of Dr. Peery's students) with the hundreds of color slides shown to him in the classroom. The practitioner seeking a review of the subject will presumably carry in his mind the pictures of what he has already seen. The omission of pictures is doubtless a factor of keeping down the price of the book. More power to the paperbacks!

The use of gloss or marginal headings is to be commended as an aid to ready reference in this book. The printed underlining of key words throughout the text, on the other hand, strikes this reviewer as too much toward "spoon-feeding." Surely the student should be allowed to do his own underlining as he digests the text for himself.

The book is quite up-to-date and includes generous

(*Continued on page 30*)

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Reference: 1. Scal, J. C.: Eye Ear Nose & Throat Month. 38:738 (Sept.) 1959.

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Antivert syrup

Each teaspoonful (5 cc.) contains 6.25 mg. meclizine HCl and 25 mg. nicotinic acid.

Book Reviews

(*Continued from page 26*)

lists of references to the current literature. One of its original features is a table to indicate the empirically probable sites of origin of a malignant neoplasm known to have involved particular groups of lymph nodes. Another novelty consists of basic definitions in list form at the start of many of the chapters. The ever-expanding field of iatrogenic disease is well represented by a detailed treatment of specific "untoward effects" of specific therapeutic agents, and by a clear statement of disadvantageous side-effects of irradiation and chemotherapy as used in cancer.

The authors are to be complimented on minimizing the number of errors or inaccuracies inevitable in any first edition. One reads on page 449 that in Kleinfelter's syndrome "the genetic sex is female," when what is meant is that the sex-chromatin pattern is female and the sex chromosome formula is XXY. Again, the reviewer questions the precision of the statement that chorioadenoma destruens (invasive mole) is a "neoplasm arising from chorionic epithelium" (page 219).

It is hoped that the authors will amplify future editions of the book with short chapters on the history of pathology, on basic methods and aims of experimental and statistical research, on differential diagnosis with special histological stains, on normal weights and measurements of organs at autopsy, and on normal values in clinical pathology. These are features neglected in most texts on pathology.

Henry W. Edmonds, M.D.

Sight—A Handbook for Laymen. Roy O. Scholz, M.D. Price, $3.50. Pp. 166. New York: Doubleday, 1960.

This volume contains basic knowledge about the structure, functions, malfunctions, and diseases of the eye. Dr. Scholz has provided lucid explanations of astigmatism, myopia, hyperopia, presbyopia, glaucoma, cataracts, crossed eyes, retinal detachment, and other ocular maladies. Descriptions of operations available for many of these conditions, such as cataract extraction and the corneal transplant, should enhance the understanding of patients, their relatives, and the interested layman.

One chapter is devoted to technics of examination of the eyes. Another discusses the blind and partially seeing. Other important topics discussed are: contact lenses, optical aids, and detection of systemic diseases by examination of the eye. These discussions are enriched with many interesting references about eye conditions from such sources as the Bible, Shakespeare, and Ben Franklin. Also included are brief historical résumés such as the development of spectacle lenses.

Dr. A. E. Maumenee, Professor of Ophthalmology at Johns Hopkins, in his introduction to this volume, states: "Dr. Scholz is admirably qualified to write a book on ophthalmology for lay consumption. He has been closely associated with the Wilmer Ophthalmological Institute of the Johns Hopkins Hospital for almost 20 years. During this time he has participated actively in the teaching of student nurses, medical students, and house officers. His large practice has brought him into close contact with the many questions asked by patients and answered in this book."

At the beginning, Dr. Scholz cautions the reader: "Bear in mind as you read the general descriptions in this book that every patient with eye trouble presents a special problem. A physician must study your eyes in order to determine your specific needs." This volume is an outstanding example of good medical writing for the layman. It should be in every public library along with a similar volume by Dr. Derrick Vail, "The Truth About Your Eyes."

Both books are effective in debunking many of the common misconceptions about eyes and glasses, such as wearing the "wrong" glasses ruins your eyes and exercises can cure or lessen myopia. Dr. Vail deals directly with the limitations of optometry. Dr. Scholz describes the medical training of the ophthalmologist but does not discuss optometry. Many intelligent patients confuse the terms "ophthalmologist" and "optometrist." Many are under the illusion that all "eye doctors" are physicians and that their eyes have been checked for disease before glasses were prescribed. This omission in Dr. Scholz's book may, however, lead the curious layman to become aware that the ophthalmologist is the one qualified by training and experience to detect diseases of the eye and systemic disease during an eye examination.

Physicians who wish to make explanations of eye problems more understandable to their patients should read these books.

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MEDICAL ANNALS
of the District of Columbia

May 1961 VOLUME XXX • NUMBER 5

Current Concepts of the Management of Syphilis*†

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PROGRESS in the diagnosis and treatment of syphilis since 1900 has been so tremendous that by mid-century there was general feeling that the disease was under complete control. Morbidity rates throughout this country dropped precipitously after 1945. Rapid treatment centers were closed; medical periodicals devoted primarily to syphilis ceased publication; and there was a general feeling that the disease would soon become a rare and exotic malady. But such was not the case. Since 1957 there has been a slow but progressive increase in early infectious syphilis reported not only in this country but in Europe as well.

It seems paradoxical that an increase in syphilis should occur when serologic tests are more reliable and treatment is simpler and more effective than ever before. A part of the answer to the problem may lie in the "hidden sources" of the infection. Brown et al[1] have recently made a plea to private physicians to give more consideration to the epidemiology of syphilis and to seek health department aid in uncovering contagious individuals from what appears to be a vast reservoir of infected sexual contacts.

CHANGES IN EPIDEMIOLOGY

The common assumption that a man contracted venereal disease from a woman in a moment of indiscretion resulted in an incomplete and false understanding of the epidemiology of the disease. A recent study in the Venereal Disease Clinic in Richmond, Virginia revealed that fellatio, homosexual relations and incest accounted for over 50 per cent of the early syphilis diagnosed.[2] Since these unusual types of sexual relations are not commonly accepted by a majority in our society, the participants to such methods are not apt to reveal them to their physician unless this is approached in an understanding manner. Even then it is difficult for physician and patient alike to discuss modes of sexual relations which most of society considers both morally and legally wrong. It is probable that a large reservoir of untreated contagious syphilis is thus not reached by casual contact investigation. Unless this undetected contagious population is reached and treated further control of the disease will be very difficult. Fortunately, capable, trained contact investigators are available at most local health departments and will gladly help physicians whenever requested.

MANAGEMENT OF PATIENTS WITH SYPHILIS

The management of patients with syphilis has lost much of its former glamour. No longer do we have the ceremony of "mixing the arsphenamine." The emergency treatment of tabetics with gastric crises is a rare occurrence, as is the severe Herxheimer reaction of the paretic which was such a hazard to nurses and hospital personnel in former days.

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* From the Department of Dermatology, Medical College of Virginia.

† Presented at the Clinical Meeting of the American Medical Association in Washington, D. C., December 1, 1960.

The laboratory diagnosis of syphilis has been greatly simplified so that batteries of tests and "split samples" of blood for testing in various laboratories are seldom required.

The most frequent problem facing the physician today is the patient with a positive serologic test for syphilis (S.T.S.) with no other apparent signs of the disease. Treatment is relatively simple with the use of the newer penicillin preparations. However, control of the disease is still as much a problem as ever and probably will remain a problem until a vaccine or other simple preventive measures are developed.

Serologic Diagnosis

The Venereal Disease Research Laboratory (V.D.R.L.) cardiolipin flocculation test has now become the standard test in most laboratories throughout this country. It is a very reliable test and will usually suffice, if repeatedly reactive, to confirm a clinical diagnosis of syphilis. If doubt exists in the V.D.R.L. results, most local public health laboratories are equipped to do a treponemal test, such as the Reiter's protein complement fixation (R.P.C.F.) or Treponema pallidum complement fixation test (T.P.C.F.). If these tests are reactive, the diagnosis of syphilis may be considered confirmed by laboratory tests. If the V.D.R.L. test is reactive and the R.P.C.F. test nonreactive, a Treponema pallidum immobilization test (T.P.I.) may be used as the final arbiter in the case.

The diagnosis of syphilis in the passive homosexual is a real problem. Because of the prevalence of pederasty the primary chancre may be "hidden" in the rectum. Thus, the patient has little or no suspicion that he has a venereal infection. Later he may be found to have a reactive serologic test for syphilis and with no history of lesions and may be misdiagnosed as a biologic false positive (B.F.P.) reactor.

The Problem of Antibiotics

Another disturbing factor in the accurate diagnosis of syphilis is the frequent use of antibiotics for other illnesses which may mask the classical signs of the disease. Subtherapeutic doses of antibiotics may be another cause for patients who develop a reactive serologic test with no history of lesions and who may be misdiagnosed biologic false positive reactors.

Before the wide use of antibiotics Moore and Mohr[3] could justifiably say that a large percentage of patients with reactive serologic test for syphilis without other signs of syphilis were biologic false positive reactors, and results of the Treponema pallidum immobilization test substantiated their stand, but today the pendulum is swinging in the other direction (figure 1), and it is probable that the majority of patients suspected of being biologic false positive reactors are in reality latent syphilitics.

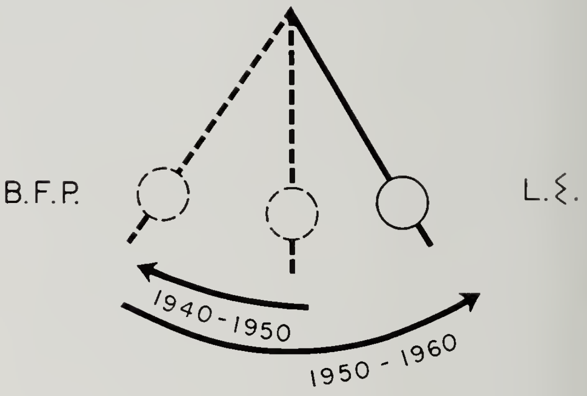

FIG. 1. Swing of pendulum over the years from biologically false-positive patients to latent syphilitics.

Treatment

The use of benzathine penicillin G has greatly simplified antisyphilitic therapy. Thus, 2,400,000 units of this preparation given at a single dose may be considered adequate therapy for early syphilis. In late syphilis this dose should be repeated in 1 week. For neurosyphilis the dose should be increased to from 6 to 9 million units. If short-acting penicillin preparations are preferred, the total dose for early syphilis should be doubled (4,800,000 units).

In the event that the patient cannot receive penicillin, other antibiotics should be used. The dosage schedules for these antibiotics have not been established to the extent that penicillin schedules have. At the present time 20 Gm. of erythromycin in 10 days is considered adequate therapy for early syphilis. Slightly higher doses will probably be required for late and neurosyphilis.

SUMMARY AND CONCLUSIONS

A definite increase in the incidence of early infectious syphilis has been noted since 1957. The majority of these patients are now treated by the private physician.

A reservoir of untreated sexual contacts of these patients remain to keep the disease alive and spreading. Trained contact investigators are available at most health departments to aid the physician in seeking out these infected persons and bringing them to treatment.

The prevalence of incest, fellatio, and homosexual behavior and the widespread use of antibiotics which may mask the lesions of syphilis add to the difficulty of making an accurate diagnosis in the patients with reactive serologic tests and with no history of visible lesions.

The diagnosis of biologic false positive reaction is probably overworked, and thorough epidemiologic investigation may prove that many of these patients are actually latent syphilitics.

With these epidemiologic problems in mind, the clinical diagnosis of syphilis can be confirmed by serologic testing, which is highly reliable in establishing an accurate diagnosis.

Treatment has been greatly simplified by the introduction of long-acting depository penicillin.

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Allergy to Insect Stings

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NEWSPAPERS and medical publications contain rather frequent reports of severe and even fatal reactions to insect stings. It has been estimated by competent authorities that there are more deaths annually from anaphylactic reactions to insect stings than from bites of rattlesnakes and other poisonous reptiles. It is obvious, therefore, that physicians should be prepared to cope promptly and effectively with allergic reactions to insect stings.

The late Warren Vaughan[1] commented that since the classical demonstration of anaphylaxis was accomplished by parenteral injections of foreign protein, it is not strange that repeated stings of insects should produce in humans allergic or anaphylactic reactions. The normal individual reacts to an insect bite or sting with pain, localized swelling, and inflammation. Subsequent stings or bites, however, by the same or related insect, may result in a reaction varying from mild allergic symptoms to severe anaphylactic shock and even death. It was formerly thought that these untoward reactions were due solely to venom injected by the offending insect, but we now know that these constitutional reactions are due to a sensitivity developed to the body protein of the offending insect. Benson[2] demonstrated this nicely with extracts of male mosquitoes which contain no stinger mechanism and no venom sacs. When patients allergic to mosquito bites were skin-tested they gave just as marked positive reactions to the venomless male mosquito extracts as they did to comparable extracts of the venom-equipped female mosquitoes. It is well known, of course, that only the female mosquito can bite, substantiating the aphorism that the female of the species is more deadly than the male.

Similarly, in working with honeybees, Benson and Semenov[3] dissected the bees and prepared extracts from the pure venom, from the stinger mechanism, and from the stingerless bodies. Skin tests with these extracts demonstrated that the bee protein was the sensitizing substance. Some have held that the reaction to bee stings was due to the injection of pollen by the bee into pollen-sensitive individuals. Microscopic examination of bee stingers has led Benson and Semenov to conclude that the bee lancet is almost entirely free of pollen contamination. The stinger of the honeybee is barbed and thus tends to stay in the puncture-wound. Dr. Karl Krombein, entomologist with the U. S. Department of Agriculture, informs me that in this part of the world the honeybee is the only insect that leaves its stinger in the victim. Therefore, if a patient is encountered with a stinger in the tissues, it must have been deposited there by the honeybee.

Allergic reactions to insect stings or bites that I have seen in my own practice have been from wasps, hornets, yellow jackets, bees, mosquitoes, gnats, and bedbugs. Hornets and yellow jackets are, of course, all members of the wasp family. The most commonly observed symptoms from insect stings or bites have been pain at the site, localized swelling and inflammation, flushing of the face and neck, headache, sneezing and nasal congestion, inflammation of the eyes, coughing, asthmatic dyspnea, localized or generalized urticaria and angioneurotic edema, weak pulse (at times almost undiscernible), marked drop in blood pressure, shock, abdominal pain, nausea and vomiting, involuntary evacuation of the bladder and bowels, cyanosis, unconsciousness, and even death. Fortunately, none of the victims of insect stings that I have seen has died. These symptoms can manifest themselves with terrifying rapidity. It is my opinion that most of the violent and fatal reactions from insect stings are due to the stinger being injected directly into a superficial blood vessel. Stings into areas of greater vascularity, such as the lips and backs of the hands, are likely to be of the fulminating variety. Mary Loveless[4] has observed that anaphylactic reactions to bee or wasp stings have been confused with coronary attacks, as, for example, when a man suddenly collapses on the golf course and it is not known that he has been stung. The sting of the Hymenoptera in a highly sensitized individual carries the same deadly potential as an assassin's bullet or knife. Probably no one has ever succumbed to an insect sting without having previously experienced 1 or more reactions of lesser severity, so, in this instance forewarned should be forearmed. The past history is of vital importance as to the type of insect involved and the degree of reaction following its sting.

Individuals allergic to insect stings should be advised to avoid the natural habitat of the offending insects. As an aside, I might mention that each time one of my patients stayed at a certain out-of-town hotel she returned home with generalized urticaria, which I found to be due to bedbug bites. Shoes, stockings, gloves and other clothing offer some protection. Black clothing is more attractive to insects than white. Sweetly scented cosmetics are also attractive to insects, in line with their affinity for the nectar of flowers. Unnecessary activity should be avoided in the vicinity of bees or wasps, and one should never strike at these insects, as this invites a sting. Extreme care should be exercised in disturbing nests or hives because of the risk of incurring multiple stings. The oral administration of thiamin chloride has been recommended as protection against mosquito bites, and the use of various insecticides and insect repellents is well known.

Prophylactically, individuals known to be allergic to insect stings or bites should be skin-tested with the extract of the suspected insect and with extracts of the other common stinging insects. These tests should be by the "scratch" method, using the most concentrated extracts because of the absolute safety of the cutaneous method. If no definite reactions are obtained with the scratch tests, intradermal tests should be done with 1 to 10 dilutions of the concentrated extracts. A common mistake in intradermal testing is to inject up to 0.1 c.c. of the extract into the skin and thus produce false-positive reactions. The proper amount of fluid to inject in intradermal testing is 0.02 c.c. or 0.03 c.c., which if injected sufficiently superficially will produce an immediate blister in the skin about $^{1}/_{8}$ inch in diameter. Hyposensitizing injections with specific insect extracts are of considerable preventive value when properly carried out and sufficiently potent extracts are used. Loveless[5] in treating her wasp-sensitive patients uses pure wasp venom which she obtains by dissecting out the venom sacs from live anesthetized wasps. I prefer to use extracts of the whole insects, venom and all, because I believe that the allergic sensitivity is to the whole body protein rather than to the venom alone.

Individuals with mild reactions to insect bites or stings may be treated with antihistamine preparations, both locally and orally. When a honeybee stings it leaves its entire stinging mechanism, including the venom sac, in the victim and hence may sting but once. However, the stinging mechanism continues a pumping action for several minutes after its insertion, thus increasing the amount of venom deposited in the wound. In removing the stinger, the protruding portion should not be squeezed, for fear of forcing more venom into the victim. The stinger should be scratched out with the fingernail, and iodine applied to the puncture wound. When an insect-allergic individual is seen shortly after an insect sting or bite on the arm or leg, a tourniquet should be applied proximal to the sting, and 0.25 c.c. of 1:1,000 epinephrine solution injected into the site of the sting. Another 0.75 c.c. of the epinephrine solution is then injected into the opposite limb. Asthmatic dyspnea may be treated with epinephrine or isoproterenol nebulizers. Aminophylline intravenously is also of considerable value when asthma complicates the picture. When the allergic reaction is of such severity as to justify more drastic therapeutic measures, 50 mg. of sterile Benadryl (diphenhydramine hydrochloride) solution should be injected intravenously, followed by an adequate intravenous dose of some cortisone derivative such as Solu-Cortef (hydrocortisone) or Solu-Medrol (methylprednisolone), which come in Mix-O-Vials ready for immediate use. Glucose intravenously is also helpful. In the rare patient who develops edema of the glottis which does not respond to epinephrine, emergency tracheotomy should be done.

Patients who are significantly allergic to insect stings should carry Nephenalin tablets at all times, with instructions that in the event of an insect sting any excess saliva in the mouth is to be swallowed, and then a tablet is to be held under the tongue for 5 minutes without swallowing and the remainder of the tablet then swallowed. These Nephenalin tablets contain isoproterenol in the outer coating, which acts almost immediately by sublingual absorption, and an inner core containing ephedrine, theophylline, and phenobarbital. A substitute tablet with similar formulation is Isuprel-Franol. Patients who are violently sensitive to insect stings should keep handy at all times an ampule of 1:1,000 epinephrine and a sterile hypodermic syringe, after being instructed as to how to administer a subcutaneous or intramuscular injection. A disposable hypodermic syringe is convenient for this purpose.

Although repeated insect stings tend to produce allergic sensitization in varying degree, natural desensitization occasionally occurs. For example, some apiculturists as a result of repeated bee stings become desensitized to the effect of these stings.

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Phenethicillin as an Antimicrobial Agent

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THE WORK OF BATCHELOR and his associates[1] in isolating 6-amino-penicillanic acid has been followed by the development of new penicillins. One of these, phenethicillin potassium, has been reported by some investigators to provide peak serum penicillin levels at least twice those produced by potassium penicillin V.[2-7] The reported urine levels also indicate that this new antibiotic is superior to penicillin V in its absorption.[5, 7, 8] The clinical significance of these findings has, however, been questioned by other authorities.[9, 10]

Phenethicillin, potassium alpha-phenoxyethyl penicillin, is a racemic mixture of D- and L-alpha phenoxyethyl penicillins. Since it may be administered orally it provides greater freedom from hypersensitivity reactions than do most parenteral antibiotics. It is freely soluble in water, resists acid degradation, and has a somewhat lower rate of inactivation by penicillinase than most other penicillins.[2]

MATERIALS AND METHODS

The antibacterial effect of phenethicillin was observed clinically in a series of 73 office patients presenting a wide variety of bacterial infections (table 1). The patients ranged in age from 3 to 47 years; 39 were females, 34 were males, and all were Caucasians.

TABLE 1

Distribution of Pathologic Conditions in 73 Cases of Microbial Infection

Condition Treated	Organism Reecovered on Culture	Clinical Results* (No. of Patients)		Toxicity, Side-effects
		Excellent	Good	
Pharyngitis	*Streptococcus pyogenes*	26	5	None
	Streptococcus viridans	2	1	None
	Streptococcus pyogenes and *Escherichia coli*	2	0	None
	Streptococcus pyogenes and *Staphylococcus albus*	1	0	None
	Streptococcus viridans and *Escherichia coli*	1	0	None
Bronchitis	*Streptococcus pyogenes*	1	0	None
	None	14	0	None
Cellulitis	*Staphylococcus aureus*	7	0	None
Tonsillitis	*Streptococcus pyogenes*	4	0	None
	Staphylococcus albus	1	0	None
Pneumonia	None	4	0	None
Pneumonia and pharyngitis	*Streptococcus pyogenes* and *Escherichia coli*	1	0	None
Postsurgical infection	*Staphylococcus aureus*	1	0	None
Tonsillitis and bronchitis	*Streptococcus pyogenes*	1	0	None
Bronchitis, otitis media, and pharyngitis	*Streptococcus viridans*	1	0	None
TOTALS		67	6	None

* Excellent—complete clinical recovery in 3 days; good—complete clinical recovery in 4 or 5 days. No other ratings were required.

Phenethicillin* was administered in the form of tablets of 125 mg. or 250 mg., or in a form that, when reconstituted as an aqueous syrup, contains 125 mg. of the antibiotic per 5 c.c. All 3 dosage forms were administered 3 times daily. The tablets were employed in 57 cases and the syrup in the remaining 16 cases. The only other medications employed were aspirin and cough preparations when indicated.

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* Supplied as Chemipen by Dr. John T. Groel of the Squibb Institute for Medical Research, New Brunswick, New Jersey.

As shown in table 1, pharyngitis comprised by far the greatest number of cases (38), followed by bronchitis (15 cases), cellulitis (7 cases), tonsillitis (5 cases), and pneumonia (4 cases). The remaining 4 cases consisted of 1 case of postsurgical infection, 1 of pharyngitis and pneumonia, 1 of tonsillitis and bronchitis, and 1 case of bronchitis, otitis media and pharyngitis.

The distribution of the pathogens in these 73 cases, together with the clinical results of phenethicillin therapy, are shown in tables 1 and 2. There were 9 cases of infection with *Staphylococcus aureus* in the present series (table 2), 7 of cellulitis, 1 of postsurgical infection, and 1 each of pneumonia and pharyngitis (associated with *Escherichia coli*). No pathogens were recovered in 14 of the 15 cases of bronchitis or in any of the 4 cases of uncomplicated pneumonia (table 2). *Staphylococcus albus* was recovered in 2 instances, once alone and once with *Streptococcus pyogenes*. *Escherichia coli* was recovered in 4 instances, always associated with other organisms (table 3).

TABLE 2

Distribution of Organisms in 73 Patients and the Clinical Results of Phenethicillin Therapy

Organism*	Number of Cases	Clinical Results†		Toxicity, Side-effects
		Excellent	Good	
Streptococcus pyogenes	41	36	5	None
Streptococcus viridans	4	3	1	None
Staphylococcus albus	2	2	0	None
Staphylococcus aureus	8	8	0	None
Escherichia coli	4	4	0	None
None recovered	18	18	0	None
TOTALS	77	71	6	None

* Two organisms were recovered in 4 cases.

† Excellent—complete clinical recovery within 3 days; good—complete clinical recovery within 4 or 5 days. No other ratings were required.

RESULTS

In the present study the therapeutic effect of phenethicillin was graded according to the number of days of treatment before relief of all clinical symptoms, as follows: excellent, 3 days or less, and good, 4 or 5 days (table 2). No other ratings were needed, since in no instance did an infection require more than 5 days of phenethicillin therapy to clear clinically.

TABLE 3

Days of Phenethicillin Therapy to Culture Negativity in 45 Cases

Organism	No. of Days to Disappearance from Culture			
	5	4	3	Total
Streptococcus pyogenes (alone)	15	19	1	35
Streptococcus viridans (alone)	3	0	1	4
Staphylococcus albus (alone)	0	1	0	1
Escherichia coli and *Streptococcus pyogenes*	1	2	0	3
Escherichia coli and *Streptococcus viridans*	1	0	0	1
Streptococcus pyogenes and *Staphylococcus albus*	0	1	0	1
TOTALS	20	23	2	45

The clinical results were rated as excellent in 67 of the 73 cases (92 per cent) and good in the remaining 6 cases. All of the latter were streptococcal infections of the throat (*Streptococcus pyogenes* was recovered in 5 instances, *Streptococcus viridans* in the others).

In the present series of 73 cases, complete culture studies were made in 45, disclosing the presence of 6 organisms: *Streptococcus pyogenes* (35), *Streptococcus viridans* (4), *Staphylococcus albus* (1), both *Escherichia coli* and *Streptococcus pyogenes* (3), both *Escherichia coli* and *Streptococcus viridans* (1), and both *Streptococcus pyogenes* and *Staphylococcus albus* (1). The number of days of phenethicillin administration to disappearance of these organisms are shown in table 3.

Staphylococcus aureus was detected on culture in the 7 cases of cellulitis and the single case of postsurgical infection (table 1), but culture studies were not continued. The clinical response to phenethicillin therapy was, in each of these 8 cases, rated as excellent.

The clinical recovery of every patient in the present series of 73 cases was rapid and complete, and in no case was toxicity or adverse side-effects observed.

The series included 9 staphylococcal infections—7 of cellulitis, 1 of tonsillitis, and 1 of postsurgical infection (table 1). All were included among the 67 cases in which response to phenethicillin therapy was rated as excellent. These findings, although limited as to number of cases, would tend to confirm the opinion of several investigators[2, 3, 11] that phenethicillin is particularly effective against staphylococcal infections.

SUMMARY

Phenethicillin (Chemipen), a newly developed oral antibiotic, was used as the initial medication in 73 cases of bacterial infection, including 38 cases of pharyngitis, 15 cases of bronchitis, 5 cases of tonsillitis, 4 cases of pneumonia, 1 case of pharyngitis and pneumonia, 1 case of postsurgical infection, 1 case of tonsillitis and bronchitis, and 1 case of bronchitis, otitis media, and pharyngitis, and 7 cases of cellulitis. Complete clinical recovery occurred within 3 days in 67 cases, and in the remaining 6 cases clinical recovery was complete within 4 or 5 days.

Complete culture studies were made in 45 cases. In none of these was it possible to recover the pathogenic organism after 5 days of phenethicillin therapy. Each of 8 cases of staphylococcal infection responded clinically to phenethicillin therapy within 3 days. No toxicity or adverse side-effects attributable to the medication were observed in any of the 73 cases.

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Endocrine Suppression of Lactation with Deladumone 2X*

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Relief of breast pain and inhibition of lactation in non-nursing mothers are common problems in the postnatal period. Various combinations of estrogens and estrogen-androgen therapy have been tried in an attempt to suppress lactation. All seem to have one or more disadvantages, such as nausea, withdrawal bleeding, administration of large numbers of tablets, frequent intramuscular injections, and complicated dosage schedules. It has been reported that 50 to 75 per cent of all new mothers either do not wish to or are unable to nurse their babies.[1] Therefore, the artificial suppression of lactation has become an important procedure in obstetrics. Suppression of lactation and prevention of postpartum breast engorgement, although not critically important to the physician, are of major concern to each postpartum mother who is not breast-feeding. The ideal therapy should be well tolerated with no side-effects, should not cause withdrawal bleeding, should not require fluid restriction during therapy, should prevent breast engorgement and discomfort, should produce only a minimal amount of breast leakage, and should not be too complicated to take or administer. From the reports of other investigators, good results are obtained with almost any of the endocrines as long as the hormone is started sufficiently early and continued long enough.

Physiologic Considerations of Lactation

It would seem that the breasts must have their glandular system prepared and primed by estrogen and progesterone for a long period of time before they will respond to the stimulation of prolactin from the anterior pituitary gland.[2] This possibly explains why the glandular system of the breast is not stimulated to secretion in the nonpregnant female. It appears to be similar to the functioning of the endometrium, which first has to be primed by estrogen before its secretory activity is affected by progesterone. The minimum dose of specific endocrine required to suppress lactation appears to depend on its ability to keep the anterior pituitary gland inhibited against the release of prolactin for the necessary number of days postpartum. Lactation appears to be dependent on stimulation of the mammary gland by the lactogenic hormone of the anterior pituitary gland, prolactin. Estrogen and progesterone cause marked growth and development of the breasts in pregnancy. Delivery of the placenta results in the removal of the main source of these hormones, and the estrogen and progesterone levels fall rapidly.[3] The decrease in estrogen levels renders the breasts susceptible to the hormonal stimulation of prolactin. The response to this stimulation in the breasts is characterized by the production of colostrum, secretion of milk, and resulting engorgement. The function of the anterior pituitary gland may be suppressed with suppression of the production of prolactin. The elevation of estrogen levels may be maintained, rendering the mammary gland insusceptible to the action of prolactin. Elevated estrogen levels stimulate endometrial proliferation with frequent heavy withdrawal bleeding.[4]

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* From the Department of Obstetrics and Gynecology, Washington Hospital Center, Washington, D. C. This paper was submitted for inclusion in the Washington Hospital Center Number but was deferred for publication because of limited space.

PROCEDURE

A study was undertaken to evaluate the lactation inhibition efficacy and possible undesirable side-effects of a single injection of a long-acting estrogen-androgen combination.[5] The preparation, Deladumone 2X, contains 360 mg. of testosterone enanthate and 16 mg. of estradiol valerate in 2 c.c. of sesame oil in true solution. The medication was injected intramuscularly immediately prior to delivery after the patient had been placed on the delivery table and the anesthetic started. The results in 50 consecutive private patients treated in this fashion are presented and discussed. There were 17 primigravidas and 33 multigravidas. Each patient received the same amount of the medication injected deeply in the gluteal muscle. No special precautions were taken postpartum in the way of fluid restriction, salt restriction, or binders. The breasts were examined daily during the hospital stay and the patients questioned as to how they felt. At the 6-week postpartum checkup the patients were questioned about their breasts since delivery. Four questions were asked:

1. Did you experience pain in your breasts at any time?
2. Did you have any feeling of inflammation or heat in the breasts?
3. Did you have any feeling of fullness?
4. Was there any leakage from the breasts?

This study is of necessity quite subjective in nature. However, the patients were urged to be as objective as possible in their answers. Forty-five patients (90 per cent) responded in the negative to the first question of any pain in the breasts whatsoever. Four patients stated they had some discomfort but nothing which they could not stand, and 1 patient had severe pain for which analgesics were prescribed. Forty-six patients (92 per cent) answered no to the second question. Three patients experienced some inflammation in the breasts, and 1 patient had a temperature elevation of 101°F which was attributed to engorgement of the breasts while in the hospital. This responded promptly to a binder, aspirin, and ice packs. Twenty patients mentioned a feeling of some fullness in the breasts, the onset varying from the second postpartum day to 2 weeks postpartum. Only 1 patient, however, stated that the fullness was of such a degree as to make her uncomfortable; the other 49 (98 per cent) are therefore classified as quite satisfactory in that respect. Thirty-three patients (66 per cent) noted leaking from the breast in varying amounts. Seventeen patients (34 per cent) noted no leakage at all. The leakage lasted 1 or 2 days in all but 6 patients. In these the breasts continued to secrete for periods up to 2 weeks postpartum. These 6 patients (12 per cent) were classified as failures for the medication. When the multiparous women were asked for their opinion of this drug compared with other modes of therapy they had had in the past for the care of their breasts postpartum, some of the comments expressed were: "worked beautifully," "much more comfortable," "very good," "new stuff is good, better than pills; the breasts were painful even with the pills," "had shots with the first one, this was better." Only 1 patient answered yes to all 4 questions (she was a registered nurse). She had pain and leaking for 1 week and inflammation and fullness for 2 days.

DISCUSSION

The injection of a single dose of Deladumone 2X appears to be an excellent therapy for the suppression of lactation postpartum. The advantages of a single injection in the convenience to the patient and saving of time for the nursing personnel are obvious. The need for analgesics and breast binders is practically eliminated. The main complaint was of transient pain at the site of injection for 24 to 48 hours in less than 10 per cent of the patients. The administration of a single injection of Depo-Testosterone intramuscularly[6] during the intrapartum or early postpartum period gave good results, but swelling of the breasts occurred in practically all patients. A recent study of a sublingual estrogen preparation was reported, and, while it was found to be easily administered by the patient, about 80 per cent reported postmedication breast-filling and 20 per cent showed increased vaginal bleeding after withdrawal.[1] There were no complications in this study attributable to Deladumone 2X. No masculinizing signs such as deepening of the voice or hirsutism were noted. There was no delay in the onset of normal cyclic ovarian function, decrease in the rate of uterine involution, change in the nature of the lochia, or uterine bleeding. It has been reported that in the event the patient decided to breast-feed after therapy with Deladumone, the suckling stimulus was shown to readily overcome the hormone-induced inhibition, and lactation occurred without difficulty when the infant was placed on the breast.[7] The normal onset of menstrual cycles and the occurrence of conception within a 4- to 5-month period following delivery suggest the absence of any adverse effects upon ovarian activity.[8] Well over 90 per cent of the patients in this study were completely asymptomatic in the critical first 4 to 5 days after delivery. The time of administration is an important factor in the efficacy of this drug. At delivery, the emptying of the uterus activates the anterior pituitary gland to accelerate the production and release of the lactogenic hormone. Once the lactogenic hormone release is prevented by a sufficiently early administration of an adequate dose of Deladumone, the prolonged hormonal action of the preparation appears to supply sustained inhibition of lactation for a long enough time to permit the patient to make the necessary physiologic adjustments to the elimination of breast-feeding without experiencing the discomforts of undesirable breast manifestations. The balance of the hormonal components in Deladumone is such that it is possible to administer this preparation in a sufficiently large dose to prevent lactation without affecting the involution of the uterus, the character of the lochia, or the restoration of normal ovarian function. It is believed that the gradual absorption of Deladumone starts shortly after administration and that its action is sustained for from 10 to 14 days.[8]

SUMMARY

A study of a long-acting estrogen-androgen preparation has been made in the suppression of postpartum lactation. It has been found to be very satisfactory and has the advantages of simplicity of administration, is well tolerated, does not cause any side-effects, does not interfere with the return of normal ovarian activity, and prevents breast engorgement and discomfort in well over 90 per cent of the patients in this study.

ADDENDUM: Since writing this report I have collected 28 additional cases in which Deladumone 2X was used. These confirm the above results, and in addition it was noted that 25 of the 28 patients had not had a normal menstrual period by the time they came in for the 6-week postpartum checkup. There were no apparent ill effects noted from this.

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Dichlorisone in the Management of Poison Ivy Dermatitis

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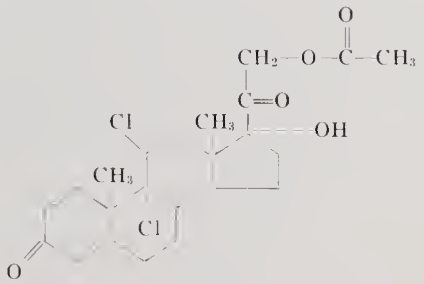
FULMER[1] offered one of the most apt descriptions of poison-ivy dermatitis when he wrote, "From the dermatologic standpoint poison ivy is the biggest plant nuisance in this country." While this contact dermatitis, which affects over a million people yearly in the U.S.A., is self-limited, in that it will subside and disappear in 1 to 4 weeks depending on its extent and severity, its acute stage is most uncomfortable to the patient and in a not insignificant proportion of cases may incapacitate him for days or even weeks. Since available desensitization methods have proved ineffective in poison ivy, there is no satisfactory means for its prevention short of total avoidance of contact with the poison-ivy plant.

Treatment of poison-ivy dermatitis is directed toward suppression of its manifestations, that is, erythema, swelling, vesicles and bullae. In the more extensive and serious cases, in which relatively large areas of body surface are affected, systemic steroids, such as prednisone or dexamethasone, are the treatment of choice.[2, 3, 4] These corticoids generally afford ready relief and are capable of substantially shortening the course of poison-ivy dermatitis. However, in mild to moderate cases, particularly those in which the hands, arms and legs are the only involved areas, as is often seen in the "week-end gardener," the application of a topical corticosteroid generally proves quite satisfactory.

I have recently studied the use in poison-ivy dermatitis of a new corticosteroid, dichlorisone, which is reported to differ from other steroids in that its activity is limited to topical therapy.[5, 6] In fact, this compound is said to exert no clinically significant effects upon oral administration, even in high dosages.[7]

CHEMISTRY

Dichlorisone* is 9 alpha, 11 beta dichloro-1,4-pregnadiene-17 alpha, 21-diol-3,20-dione-21 acetate. As may be seen from the structural formula,



Dichlorisone

a chlorine atom has been substituted for oxygen at the 11 position of the steroid molecule. Dichlorisone appears to be the first corticosteroid with this molecular modification, which exerts a potent anti-inflammatory effect.

MATERIALS AND METHODS

Dichlorisone was given in the form of a foam aerosol to 53 patients with mild to moderate poison-ivy dermatitis affecting principally the hands, arms and/or legs. These patients comprised 11 white and 6 colored males, ranging in age from 12 to 60 years, and 28 white and 3 colored females, ranging in age from 15 to 40 years; the remaining 5 patients were children between the ages of 18 months and 3 years.

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* The dichlorisone used in this study was furnished, as Diloderm, through the courtesy of Dr. G. Kenneth Hawkins, Department of Clinical Investigation, Schering Corporation, Bloomfield, New Jersey.

Patients were instructed to apply boric acid compresses 3 times daily (if possible) and dichlorisone foam 4 to 6 times a day. A small number of patients also received dextrochlorpheniramine tablets, 6 mg., twice daily. The dichlorisone foam aerosol used in this study contained 18.75 mg. of active material per 10 Gm. unit.

Clinical Results

All 53 cases in our series responded satisfactorily, with most patients reporting voluntarily that marked symptomatic relief occurred within 12 hours after application of dichlorisone foam. When patients were seen after 24 hours they revealed definite objective improvement, as reflected by substantial decrease in oozing and new vesicle formation. After 48 to 96 hours healing had begun in the majority of cases.

There were no cases of primary irritation due to dichlorisone in the series.

Comment

It is my impression that symptomatic relief is significantly more rapid with the use of dichlorisone foam than with that of conventional lotions, such as phenol and calamine, and wet dressings. In addition, lesions involute more readily when dichlorisone foam is employed. Most patients were able to use their hands on the second or third day of therapy, as compared to the 6 to 8 days generally required with other therapeutic regimens. It is also interesting to note that all but 4 patients reported that they were able to sleep well beginning with the first night of therapy.

The dichlorisone foam preparation was cosmetically acceptable to all patients; this factor increased patient coöperation in that there was no objection to the use of the medication at work during the day.

Summary

Dichlorisone, a new topical corticosteroid, was given to 53 patients with mild to moderate poison-ivy dermatitis affecting the arms, hands and/or legs. A satisfactory response, as reflected by rapid symptomatic improvement and regression of lesions, was seen in all cases. There were no cases of primary irritation or other side-effects due to dichlorisone.

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Primary Pulmonary Hypertension*

A Serious Cardiopulmonary Disorder

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PRIMARY PULMONARY HYPERTENSION is a serious disorder of unknown etiology, usually rapidly fatal within a period of 5 months to 5 years after its clinical recognition. In 1949 and 1950 several authors[1, 2, 3] published cases with hemodynamic data in which the diagnosis of primary pulmonary hypertension is practically unquestioned.

Dresdale[4] referred to data on 1 case by Wittenberg[5] in which hemodynamic and autopsy confirmation were known. He also reported several cases, 1 of which was confirmed postmortem.

Severe sclerosis of the pulmonary arteries of unexplained origin was reported by several authors since the beginning of the twentieth century. In 1941 Brill and Krygier[6] reported cases and reviewed the literature on primary pulmonary vascular sclerosis. They proposed the theory that the vascular disease and the right heart hypertrophy represent a physiopathologic response to pulmonary hypertension of unknown etiology.

This disorder appears to be uncommon. The number of cases reported since 1951 is sufficient to permit the delineation of a reasonably clear-cut clinical picture so that the condition can be strongly suspected on clinical grounds alone.

Three outstanding symptoms characterize these patients: exertional dyspnea, episodes of precordial pain, with or without exertion, and periodic syncopal attacks with exercise. This triad presents occasionally in association with dizziness and headaches on straining at stool. These symptoms in a young person, most commonly a female, free of systemic hypertension or previous valvular disease, associated with clinical evidence of right ventricular hypertrophy strongly suggest the diagnosis of primary pulmonary hypertension.

The purpose of this paper is to present the clinical and hemodynamic data and the histologic findings of lung biopsy in a patient with classical symptoms and clinical course of primary pulmonary hypertension. In addition, we are presenting a review of the major hemodynamic data in 50 cases as reported in the American and to a lesser extent the foreign literature since 1951.

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* Supported in part by a grant-in-aid from the National Heart Institute, National Institutes of Health, Public Health Service, Department of Health, Education, and Welfare.

REPORT OF CASE

D. H., a 26-year-old gravida III, para III, was admitted to the Hospital because of: "When I run I faint," episodes of pain behind the lower end of the sternum going through to the back, precipitated by walking and other exercise, and exertional dyspnea. This patient apparently was in normal health until 1957, about 3 months following a normal and uneventful delivery of her third child. At that time she first began to note transient "blackouts" on attempting to run and later, on walking uphill. During the next 12 months apparently there was very little change in her condition. She was able to carry on most of her normal activities provided she avoided running and heavy exertion. About a year after the onset of symptoms she began to develop moderate exertional dyspnea which was gradually progressive, followed later by occasional episodes of paroxysmal dyspnea at night. In January, 1960, about 2 years after the initial onset of exertional blackouts, the patient developed rather severe exertional retrosternal pain which radiated through to the back. Although this retrosternal pain was quite severe at times, there was no history of radiation of the pain into the arms, the neck, or the epigastrium. All of the patient's symptoms were of increasing severity from January, 1960 up to the time of the hospital admission on April 20, 1960.

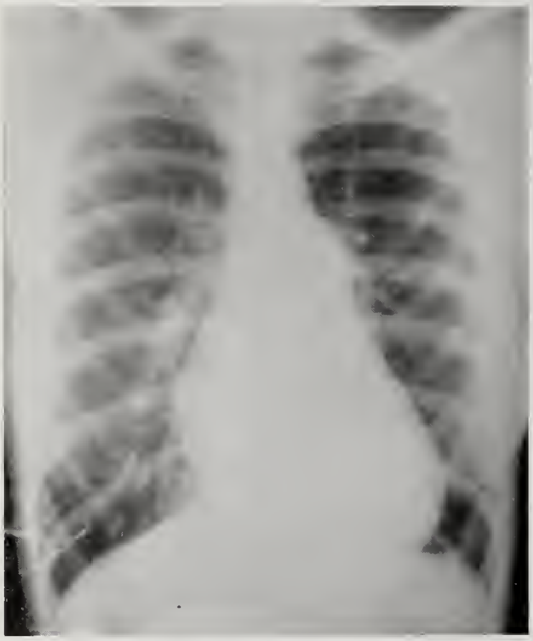

FIG. 1. Preoperative film, showing blunting of apex of heart, enlarged pulmonary artery and primary branches.

The patient's past history is significant in that there had been no cardiorespiratory symptoms nor any other major complications during the prenatal, parturition or postpartum periods of any of the 3 pregnancies. The patient had been an active participant in volley ball during high school days without disability. The clinical history was negative with reference to congenital heart disease, rheumatic fever, or any other cardiorespiratory abnormality during childhood and adolescence. There had been some slight epistaxis during childhood, pleurisy at the age of 23, and pyelitis during the second pregnancy. The family history was negative for congenital heart disease and episodes of sudden death in young people.

The significant physical findings were as follows: She was an apprehensive young woman, thin and apparently chronically ill. The mucous membranes and nailbeds were normal in color; there was no clubbing of the digits. There was marked heaving of the precordial area and a distinctive systolic pulsation in the pulmonic area. The cardiac rhythm was normal and the heart rate 88. The blood pressure was 95/60. The aortic second sound was of normal intensity, but the pulmonary second sound was greatly accentuated. There was no splitting of the heart sounds and no cardiac murmurs. The lung fields were clear to percussion and auscultation. Breath-holding in inspiration was less than 5 seconds. The jugular veins were not distended and the liver was not enlarged. There was no upper quadrant tenderness nor edema of the lower extremities.

The circulation time (arm-to-tongue) was 15 seconds. Venous pressure was 150 mm. of water with a rise to 170 mm. on 30 seconds of right upper quadrant pressure. An X-ray film of the chest showed a moderately enlarged cardiac silhouette with blunting of the apex, moderate enlargement with convexity of the pulmonary artery segment, and enlargement of the primary branches of the pulmonary artery at the hilar areas, unassociated with hypervascularity of the peripheral lung fields (figure 1). The electrocardiogram (figure 2) showed normal sinus rhythm and large peaked P waves in lead II, with a P-R interval of 0.18 second and a QRS interval of 0.08 second. The precordial lead showed typical right ventricular hypertrophy of the systolic overloading pattern.[7]

The routine laboratory data showed negative serologic tests for syphilis, 7,600 white blood cells per cu.mm., hematocrit 42 per cent, hemoglobin 12.5 Gm., and a normal urinalysis.

The clinical impression was primary pulmonary hypertension.

Right-heart catheterization was done with great caution. The right ventricular systolic pressure exceeded the brachial artery systolic pressure, although the pulmonary arterial mean pressure and that by the brachial

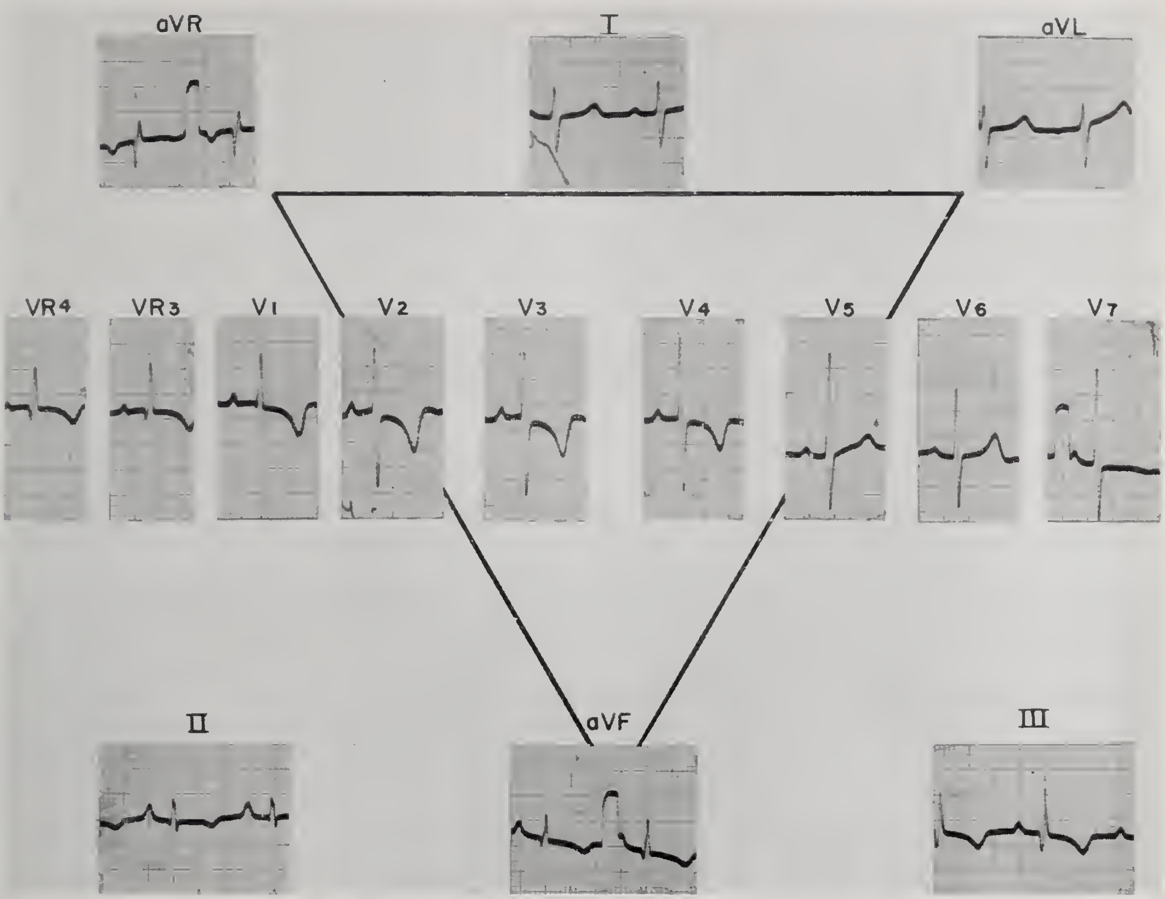

FIG. 2. Right ventricular hypertrophy—electrocardiogram, March 29, 1960.

artery were about equal (figure 3). No shunts could be demonstrated on the basis of oxygen saturations in the different chambers and great vessels. The hemodynamic data along with the normal values for the laboratory are listed in table 1.

The only significant difficulty encountered during the catheterization was a tendency for the systemic pressure to decline toward the end of the procedure. This was readily controlled by parenteral Wyamine. The development of this hypotensive state, however, prevented the administration of nitroglycerin in order to determine its effect on pulmonary arterial resistance, pressure and flow.

Ten days following right heart catheterization a wedge biopsy of the lung was done from the right middle lobe. At operation the visceral pleura showed remarkable vascularity, giving the impression of some form of telangiectasis. Histologic study of the lung biopsy specimen showed the medium-sized and small muscular arteries remarkably pathologic (figure 4). The smallest arteries showed marked endothelial proliferation with rich nucleation and drastic reduction in lumen size, in some instances to the point of obliteration. A medium-sized artery showed a well-preserved media, great intimal hyperplasia, and an eccentrically located, restricted lumen. There were no evident arterial thrombi. The alveolar walls were slightly congested but otherwise not abnormal. These findings are widely reported as characteristic of the histologic changes in the medium-sized and smallest arteries in the lungs of patients with primary pulmonary hypertension.[4, 6, 8-13, 19]

During the evening following the biopsy the patient complained rather persistently of moderate precordial pain similar to that which she had experienced previously. In addition, she complained of some pain in the right side of the chest at the operative site. An electrocardiogram taken at this time showed no significant change.

The following day the patient continued to complain of chest pain. The heart rate was 84, the blood pressure 88/70. The breath sounds were well transmitted throughout both lung fields although the patient had a tachypnea of 48 per minute.

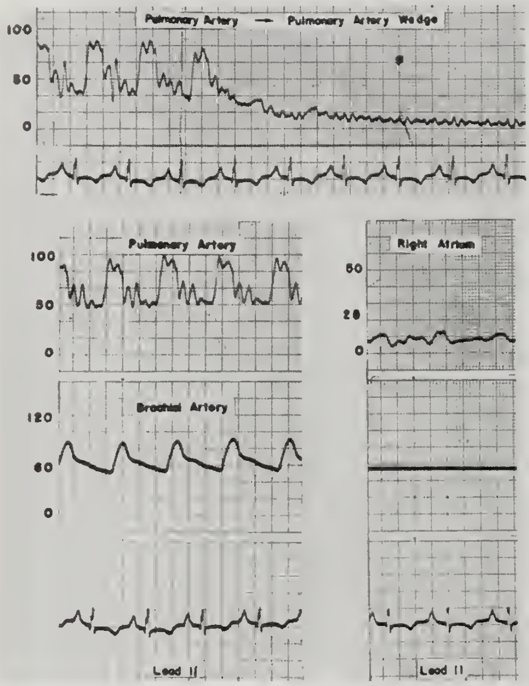

FIG. 3 Pressure curves during right heart catheterization.

Another X-ray film of the chest showed no significant new development. The patient was returned from the recovery room on May 5, 1960. The blood pressure continued at 90–80/60. The respiratory rate decreased to 28, but the cardiac rate increased to 116.

On May 6 the patient seemed generally improved, but she had become markedly apprehensive and was unable to tolerate solid food because it resulted in epigastric discomfort. She did not show significant improvement on May 8, and on May 9 she developed nausea and intermittent vomiting. The chest pain seemed to be aggravated by breathing. There was distinct right upper quadrant tenderness, but the liver edge was not palpable. It was thought that the patient might have developed acute right ventricular failure. She was digitalized, put on salt restriction, and given Thiomerin and Diuril as diuretics.

By the ninth postoperative day the patient's clinical course had become progressively unfavorable. There was marked air-hunger without significant cyanosis. The patient appeared pale, showed marked diaphoresis, and there was a continuous tendency for the systemic blood pressure to fall below 80 mm. Hg. A systolic murmur developed with greatest intensity in the tricuspid area, which we considered to indicate tricuspid insufficiency associated with acute right heart failure. Sublingual nitroglycerin in repeated doses during the postoperative

TABLE 1

Hemodynamic Data

Data	Normal	Patient	Literature (50 Cases)[1,3,4,8–27]
Blood Gases			
Arterial O_2 saturation (%)	92-98	90	92
Mixed venous O_2 saturation (%)	60 ± 4	55	—
A-V difference in O_2 (Ml./L)	30–50	63	60
Cardiac index (L/min./M^2)	3.2 ± 0.4	2.94	2
Pressures (mm. Hg)			
RA (mean)	−2 to ±6	8	9
RV (systolic/end-diastolic)	30/6	98/8	91/11
PA S/D (mean)	30/12 (17)	97/44 (62)	93/50 (64)
"PC" (mean)	Up to 12	3	9
Systemic S/D (mean)	120/80 (95)	90/53 (66)	115/83 (90)
Vascular resistance (dynes-second cm.^{5})			
Systemic	800—1,600	1,193	2,300
Pulmonary (arteriolar)	80–160	1,176	1,600
Pulmonary arteriolar, per cent of systemic	10	98	70

GLOSSARY:

A-V	Arteriovenous	PA	Pulmonary artery
RA	Right atrium	S/D	Systolic/diastolic
RV	Right ventricle	"PC"	"Pulmonary capillary" (wedge pressure)

period failed to modify the clinical course. The patient expired late on the ninth postoperative day.

A postmortem examination was not permitted.

DIFFERENTIAL DIAGNOSIS

The differential diagnosis in this patient must include (1) primary pulmonary hypertension, (2) congenital heart disease with pulmonary hypertension resulting in reversed or bidirectional shunt (Eisenmenger syndrome), (3) pulmonary hypertension secondary to chronic or recurrent lung disease, and (4) pulmonary hypertension secondary to left heart disease.

Our data appear adequate to exclude disease of the left heart as a cause of the pulmonary hypertension. There were no murmurs suggestive of disease of the aortic or mitral valve. The pulmonary wedge pressure was normal, thus eliminating left ventricular failure or a silent mitral stenosis.

Recurrent, silent, small pulmonary emboli seemed highly improbable in view of the lack of evidence of such disease in the section from the lung biopsy even though the section taken was limited. This possibility was seriously considered in view of the onset of clinical symptoms in this patient about 3 months following normal delivery.

The Eisenmenger syndrome type can be excluded in the great majority of cases because of the absence of catheterization findings of left to right or bidirectional shunt, absence of clubbing of the digits, and complete absence of any cardiac murmurs at a time when the patient was not in evident heart failure. Relatively silent recurrent pulmonary thromboembolism with pulmonary hypertension is most difficult to exclude.

Chronic lung disease appears to be excluded, both because of the normal findings radiographically and the fact that the lung biopsy fails to show evidence of alveolar capillary pathology or any other recognizable parenchymal disease of the lung. Other causes of pulmonary hypertension not seriously considered in this patient include periarteritis nodosa, dis-

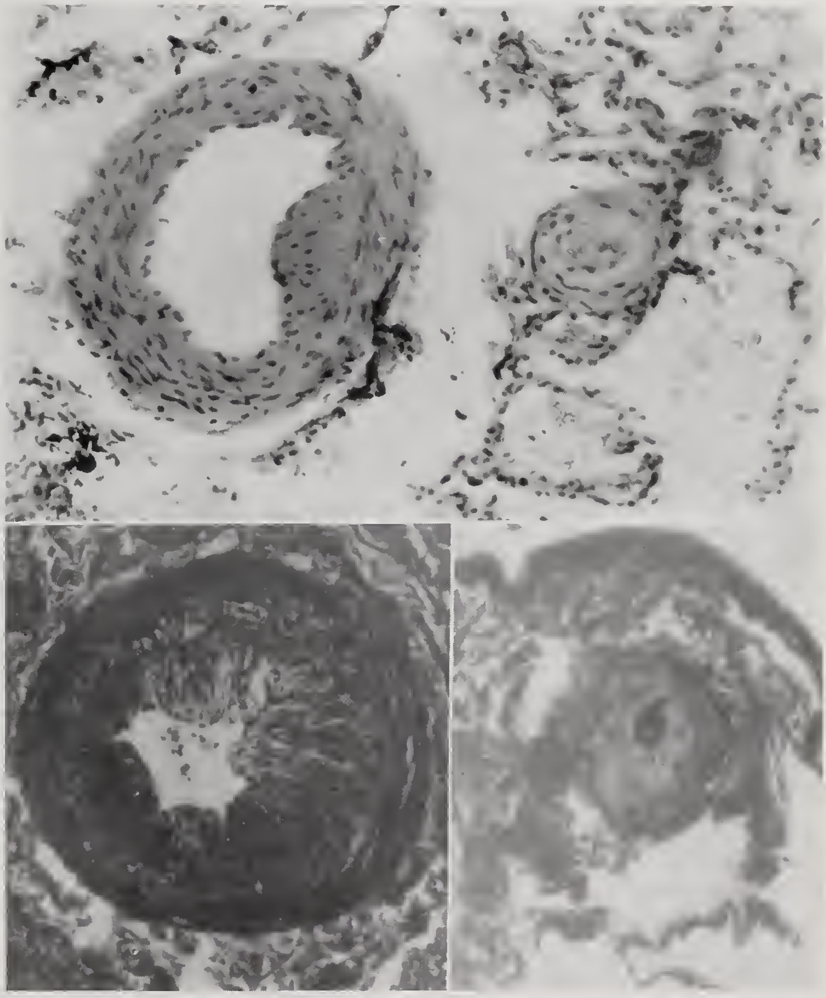

FIG. 4. Proliferation of intima and medial hypertrophy of small pulmonary arteries and occlusive intimal proliferation of arterioles.

seminated lupus erythematosus and schistosomiasis.

DISCUSSION

HEMODYNAMIC DATA IN CASES REPORTED FROM LITERATURE

We have reviewed a total of 50 cases of primary pulmonary hypertension reported in the American and foreign medical literature since 1949, in which right heart catheterization data were available to substantiate the diagnosis. The average values for arterial oxygen saturation, arteriovenous oxygen difference, cardiac index, pressures and vascular resistances in these 50 cases are presented in table 1.

The hemodynamic data on our patient are remarkably similar to the data as averaged from the 50 cases reviewed in the current literature with the exception that our patient showed esentially normal cardiac output.

The magnitude of the increased pulmonary arteriolar resistance in patients with primary pulmonary hypertension is readily apparent when one expresses this resistance as a percentage of the systemic resistance. In the normal subject the pulmonary arteriolar resistance represents only 10 per cent of the systemic arteriolar resistance. In the cases reported in the literature the pulmonary arteriolar resistance had increases to the point that it represented 80 per cent of the systemic resistance. In our patient the pulmonary arteriolar resistance had increases to approximately 100 per cent of the systemic resistance. Under these circumstances it is not surprising, therefore, that these patients develop such massive right ventricular hypertrophy. In about half of the patients reviewed the systolic pressure in the pulmonary artery equaled or exceeded that in a systemic artery. In 1 case reported the systolic pressure of the pulmonary artery was found to be 200 mm. Hg.[25]

The configuration of the pressure curves of the right ventricle and pulmonary artery are similar to those found in other types of severe pulmonary hypertension and are, therefore, not pathognomonic.[17, 28, 29] They include a slow rise with a late summit and a slow decline both in the right ventricular and pulmonary artery pressure curves (figure 3).

Wood[20, 30] indicates that patients with primary pulmonary hypertension, in the absence of right ventricular failure, show a large wave in the right atrial curve which he calls the "giant A wave." He interprets this as due to the powerful right atrial contraction. This "giant A wave," he indicates, is also present in cases of tricuspid atresia, tricuspid stenosis, and isolated pulmonary valvular and infundibular stenosis. Our patient did not show a "giant A wave" in the right atrial curve nor does it appear regularly in the reported cases of other investigators.

PATHOPHYSIOLOGY OF CERTAIN CLINICAL MANIFESTATIONS

A variety of physiologic studies have been made by several investigators in an effort to clarify the clinical symptoms associated with exercise.[4, 9, 14, 16, 20, 21, 30] At rest, a reasonably adequate venous return through the lungs to the left heart is maintained by a massively hypertrophied right ventricle, operating at extremely high pressure but also operating near its limit of reserve.

At the onset of walking or running exercise, the precariously balanced, straining right ventricle is almost instantaneously stressed by the immediate and steep rise in the resting pulmonary hypertension. In all probability there is some initial increase in systemic venous return which, in addition to the now extreme pulmonary arterial hypertension, results in acute right ventricular failure during the first one-half to several minutes of exercise. In Howard and Lowe's case[21] the right ventricular end-diastolic pressure began to rise immediately with the beginning of exercise, and by the end of the 30 to 60 seconds of exercise the right ventricular end-diastolic pressure had increased 10 to 15 mm. Hg. It is their impression that this acute right ventricular failure occurring during exercise sharply decreases the right ventricular output, the pulmonary flow and the left heart venous return, causing the falling systemic blood pressure. In the severe case, with very transient exercise periods, the systemic pressure continues to fall in the post-exercise period, resulting in dizziness and finally unconsciousness.

During this severe hypotensive phase bradycardia often ensues and is followed by a variety of arrhythmias.[21] The expected exercise augmentation of coronary flow does not develop; indeed, the coronary flow undoubtedly drops with the severe fall in aortic pressure. This may well be related to the angina-like pain not uncommon in these patients. It is of interest that 1 of Dresdale's patients developed substernal pain and positive electrocardiographic changes following step-up exercises.[4]

CRITICAL CARDIORESPIRATORY BALANCE OF THE PRIMARY PULMONARY HYPERTENSIVE PATIENT

The critical cardiorespiratory balance is well illustrated by the high frequency of exertional syncope as a major symptom and the high incidence of sudden death in these patients.

Cardiac catheterization has proven a distinct hazard in the small group of these patients undergoing this procedure, in contrast to that in the thousands of valvular and congenital cardiac patients similarly studied. In a recent overall survey of fatalities associated with right-heart catheterization 31 were documented out of the many thousands of procedures done throughout the world. Sixteen of these fatalities were considered as definitely due to a precipitated cardiac arrhythmia. Fifty per cent of these fatal arrhythmias occurred in patients with primary pulmonary hypertension.[12] It has been suggested that acute right ventricular failure, further reduction in pulmonary flow, and diminished coronary flow incident to the fall in aortic pressure may be the factors initiating the fatal arrhythmia in these patients.[12]

Our patient did not develop any complication from right heart catheterization. It may well be that monitoring of these patients should include continuous observations to detect falling systemic pressure as well as the usual monitoring for electrocardiographic changes in rhythm.

PHARMACOLOGIC STUDIES AND OTHER THERAPEUTIC MEASURES IN PRIMARY PULMONARY HYPERTENSION

A variety of therapeutic procedures have been used in an effort to improve the prognosis in these patients, including the administration of Priscoline, hexamethonium, aminophylline, cortisone, prednisone, reserpine and acetylcholine. The intracardiac infusion of acetylcholine, Priscoline and aminophylline have been reported to produce a transient reduction in pulmonary vascular resistance in these patients, but no permanent clinical benefit has been demonstrated.[4, 20, 30-33] Stellate-ganglion block and upper thoracic sympathectomy have been ineffective therapy.[16, 32, 34]

In view of our experience demonstrating a decreased pulmonary resistance following sublingual nitroglycerin in patients with secondary pulmonary hypertension we[35, 36] had hoped to study its effect in this patient. At the stage of her right heart catheterization, when this study might have been done, the patient showed some tendency toward a falling systemic blood pressure. Further prolongation of the studies was therefore considered unjustified.

ANAMNESTIC DATA

The incidence of primary pulmonary hypertension among cases of clinical heart disease has been estimated by Wood[20] as approximately 2 per thousand. The cases reported to date show a 3 to 1 predominance of female subjects. The age range has varied from childhood to old age, but the greatest incidence is between 20 and 40 years.

The clinical signs and symptoms in these patients are rather distinctive. Table 2 summarizes the clinical manifestations with their respective incidence, as estimated from a total of 40 cases collected from the literature.

TABLE 2

Frequency of Symptoms and Signs in Patients with Primary Pulmonary Hypertension

Symptoms	Per cent	Signs	Per cent
Exertional dyspnea	95	Accentuated P2	96
Precordial pain (exertional)	42	Right ventricular hypertrophy (ECG)	96
Exertional syncope	26	Cyanosis (slight)	88
Orthopnea	10	Cardiomegaly	85
		Hepatomegaly	58
		Heart murmurs	50
		Ascites	38
		Hydrothorax	13
		Clubbing of digits	10

As in our case the average patient experiences 1 or more of a triad of symptoms: exertional dyspnea, precordial pain with or without exertion, and exertional syncope.

The chest pain at times simulates that of angina pectoris, in some instances with associated transitory electrocardiographic alterations. In other cases the pain may be deep-seated, radiating through to the back.

On physical examination the most frequent findings include slight peripheral cyanosis, left parasternal heave of right ventricular hypertrophy, and a very loud P2. The electrocardiogram usually shows sinus rhythm with systolic overload pattern of right ventricular hypertrophy.

In the very few cases in which a lung biopsy has been performed, the findings are almost uniformly the same: The smaller pulmonary arteries, as well as the arterioles, show intimal proliferation with a variable reduction of the lumen and marked hypertrophy with rich nucleation of the media.

Once the patient becomes symptomatic, the clinical course is usually progressively downhill with increasing right-heart failure and dyspnea. The duration of life after the onset of symptoms is variable, from 1 month up to 26 years, the average in the cases reviewed by Parmley and Jones[37] being 3 years. Sudden death occurs in about 20 per cent of the patients.

The differential diagnosis as seen in the literature has been presented in the consideration of this patient (*vide supra*). Wood[30] points out, however, that in most pulmonary hypertensive patients with either the Eisenmenger syndrome type or with recurrent small pulmonary emboli, the acetylcholine test gives a negative response, while it is almost uniformly positive in patients with primary pulmonary hypertension.

On autopsy the right ventricle shows an average thickness of 1 cm., this thickness being 85 per cent of that of the left ventricle, in each instance about twice normal. The average heart weight was 507 Gm. in adults. The histologic changes in the lungs are similar to those described in our patient.

Organized pulmonary arterial thrombi are not infrequent in the postmortem studies of these patients. With advanced stages of organization the differentiation between thrombi in situ and emboli is extremely difficult. Some authors think that clots in a large branch of the pulmonary artery and or the presence of old and fresh clots anywhere in the pulmonary arteries point toward multiple pulmonary embolization.[20] Nevertheless, this is still a controversial matter. The fact remains that thrombosis within the pulmonary arterial tree is not an infrequent histologic finding in primary pulmonary hypertensive patients.[38] For this reason some authors advocate immediate and long-term anticoagulant therapy for these patients.

SUMMARY

The case of a 26-year-old female with primary pulmonary hypertension has been presented who showed the classical clinical and hemodynamic findings and the rapidly progressive course described in this disorder.

A brief review of the majority of cases reported in the literature which were proven by

hemodynamic and histologic studies has been presented. The etiology of primary pulmonary hypertension is unknown. It is characterized clinically by exertional dyspnea, periodic exertional syncope, and episodes of precordial pain with and without exertion. The condition is most common between the ages of 20 and 40 years and is more frequent in females.

The electrocardiogram shows changes seen in right ventricular hypertrophy. Hemodynamic studies, in the advanced case, show pressures in the pulmonary arteries equal or exceeding the systemic arterial pressure with corresponding increase in the pulmonary arteriolar resistance. These patients are in delicate cardiorespiratory balance, such that slight exercise may precipitate acute right heart failure, rapidly falling systemic pressure, and syncope. Sudden death is not uncommon. Cardiac catheterization has been demonstrated to be an increased hazard in these patients as compared to patients with other forms of cardiorespiratory disease.

No effective therapy has been evolved to date.

Acknowledgment: We are indebted to Mrs. Joyce Griffin for alert graduate nursing service, to Mrs. Audrey Fairley for expert technical hemodynamic assistance in this study, and to Mrs. Elsie H. Morman for the careful preparation of the manuscript.

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Cutaneous Reaction to Sulfamethoxypyridazine

Case Report and Review of the Literature

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NUMEROUS REPORTS have been published in the past 3 years concerning a new, long-acting sulfonamide preparation, sulfamethoxypyridazine* (3 - sulfanilamido - 6 - methoxy - pyridazine).[1, 2, 3] This drug, synthesized by Clark and his associates, has been shown to have antibacterial activity comparable to that of sulfadiazine.[4] Its value lies in its slow elimination from the body, and only 1 or 2 daily doses are required to maintain therapeutic blood levels.

The incidence of toxic and sensitivity reactions associated with the sulfonamides has been reduced with the use of the newer derivatives.[5, 6] However, they do occur.[7, 8] With the use of sulfamethoxypyridazine drug rashes have been described in a variable percentage of patients. In most instances these eruptions have been mild and have subsided on cessation of the drug, but occasional severe cutaneous reactions have been reported.[9-14]

The following complication is reported because of the severity of a painful purpuric rash with associated mucous membrane and conjunctival involvement. The case is also of interest because of the progression of the rash despite discontinuance of the drug and the administration of steroids and antihistaminics. Although penicillin and streptomycin were administered a week before the onset of the rash, this was not the type of rash usually associated with either drug. Also, penicillin had previously been tolerated by this patient with no reaction.

REPORT OF CASE

G. C. (WHC no. 031727), a 20-year-old colored married woman, was admitted to the Washington Hospital Center on September 28, 1959 because of a skin rash and mouth lesions of 1 week's duration. Seventeen days prior to admission she was treated with an unknown amount of penicillin and streptomycin for a vaginal discharge. Fourteen days prior to admission and 7 days before the development of her rash, sulfamethoxypyridazine was administered, 1 Gm. initially and 0.5 Gm. daily thereafter for 7 days, a total of 4 Gm., when flushing, erythema, malaise and nausea developed. This rapidly progressed to a diffuse purpuric, painful, burning eruption over most of her body and eyes (figure 1). The drug was discontinued at the onset of the rash.

Over subsequent days the reaction continued with the appearance of vesicular lesions in the mouth and on the lips and conjunctivae. The patient saw another physician who treated her with antihistaminics and intramuscular injections of cortisone acetate. Prednisone (Meticorten) was begun in the dosage of 5 mg. every 4 hours. Even under this therapy the lesions progressed, and raised erythematous papules were noted in the palms of the hands. Because of the oral lesions the patient was unable to eat and was bedridden with the pain and tenderness of the generalized eruption. She was brought to the emergency room of this Hospital and was admitted to the ward service.

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* Supplied as Kynex by the Lederle Laboratories Division, American Cyanamid Company, Pearl River, New York, or as Midicel by Parke-Davis and Company, Detroit, Michigan.

The past medical history revealed that the patient had a history of asthma with the most recent attack having been 2 months prior to admission. She had previously received penicillin without untoward effects. She was uncertain if she had ever received sulfonamides.

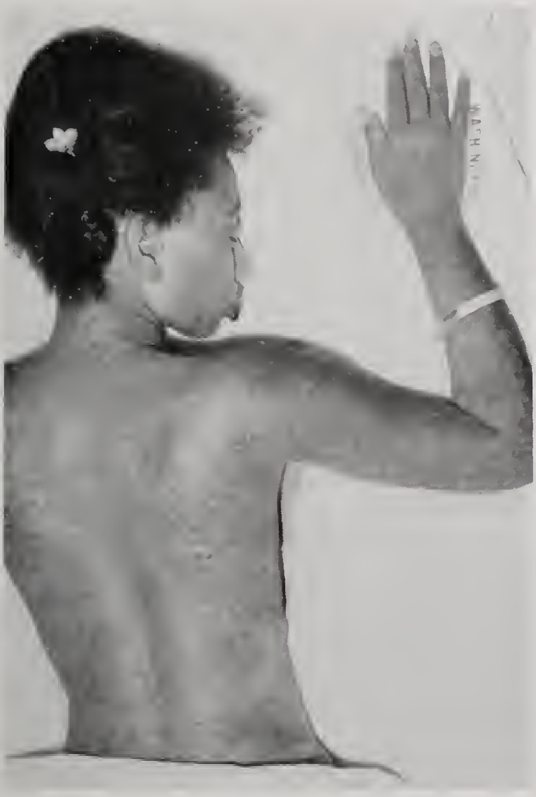

FIG. 1. Note character and extent of rash.

The patient appeared acutely ill. The blood pressure was 130/70, the heart rate 100, the temperature 101°F, and the respiratory rate 18. The skin was involved with a generalized eruption of macular purpuric type affecting the entire torso and extremities, with the lesions quite confluent in many areas. Small erythematous papular lesions were present on the palms of the hands. The face was mildly erythematous with definite edema of the eyelids. There was mucopurulent exudate of both eyelids, which were largely sealed shut. The lips were cracked and crusted (figure 1). The oral mucous membranes were diffusely erythematous with several small, partly ulcerated vesicular lesions visible on the gingival areas, the soft palate and the tonsillar fossae. The lungs were clear to percussion and auscultation, and the cardiac examination revealed only slight tachycardia. The abdomen was moderately tender on deep palpation, but no organs were felt. Minimal periarticular swelling of the joints of the hands and feet was noted.

A urinalysis was normal. The hemoglobin was 13.0 Gm. per 100 ml. with a hematocrit of 39.5 per cent. The white blood cell count was 12,900 with 48 per cent segmented forms, 9 per cent band forms, 5 per cent eosinophils, 27 per cent lymphocytes, and 11 per cent monocytes. The platelet count was 265,000. The total eosinophil count was 297/mm^3. The serology was negative. The bleeding time was ½ minute, the clotting time 7½ minutes; the prothrombin time was 15.9 seconds with a control of 15.0 seconds. The blood urea nitrogen was 7 mg. per cent. A lupus erythematosus preparation was negative. Serum electrophoresis revealed a total protein of 6.3 Gm. per cent with albumin of 2.2 Gm. per cent and an increase in the gammaglobulin fraction (1.8 Gm. per cent). Cultures of the ulcerated oral lesions showed alpha hemolytic streptococcus and *Neisseria sicca* and *flava*. Culture of the conjunctival exudate revealed *Staphylococcus epidermidis*, and gamma hemolytic streptococcus.

The patient was treated with prednisone, 60 mg. daily in divided doses, and Achromycin syrup, 250 mg. every 6 hours, as well as local therapy of the conjunctival and cheilous lesions. The fever responded dramatically to this therapy and remained normal throughout the hospital course. The skin lesions healed slowly over several days, but there was definite subjective improvement within 4 days. The acute cutaneous lesions faded quickly, but the lesions were still visible at the time of discharge on the fourteenth hospital day, at which time the patient was entirely ambulatory and eating a regular diet.

DISCUSSION

The incidence of cutaneous sensitivity reactions has varied with the different sulfonamide derivatives and with the series reported. Dermatitis has been reported in approximately 1.5 per cent[15, 16] to 2.0 per cent[17] of patients treated with sulfadiazine. Of patients treated with sulfisoxazole (Gantrisin), the incidence has been reported as 0.7 per cent[15] and 1.96 per cent,[16] although Yow[8, 18] found no case of dermatitis among 1,000 consecutive patients treated with this agent.

There have now been numerous reports on the use of the long-acting sulfamethoxypyridazine in patients. The incidence of skin eruptions has varied from 0 per cent[19-23] to 15.3 per cent[10] of total patients treated in various series. A review of a total of 1,461 patients in 19 reported series (table 1) showed 55 instances of dermatitis, an incidence of 3.8 per cent. This appears to be a higher figure than reported with other sulfonamides.

TABLE 1

Number of Patients from Various Series Who Have Developed Cutaneous Reactions during Therapy with Sulfamethoxypyridazine

Series	Total No. Treated	Cutaneous Reactions	Description
Jackson et al[24]	56	4	Diffuse, erythematous maculopapular
Ross et al[25]	70	1	"Transient"
Walker et al[26]	32	1	Maculopapular
Frisk et al[27]	32	1	"Exanthema"
Harris et al[28]	25	1	Morbilliform
Jones et al[19]	19	0	
Songco et al[29]	36	1	Urticarial
Cleveland et al[30]	20	0	
Shidlovsky et al[20]	19	0	
Smith et al[31]*	19	1	Macular
Clapper et al[21]	14	0	
Vinnicombe[22]	110	0	
Sanchez et al[32]	40	1	Morbilliform
Prlina et al[12]	28	4	"Mild" in 3, morbilliform with exfoliation in 1
Weihl[33]	105	3	Morbilliform (2); urticarial (1)
Sheth et al[23]	20	0	
Lindsay et al[10]	85	13	Maculopapular erythematous (4); petechial (2); morbilliform (4); urticarial (1); scarlatiniform (1); papular, later bullous and purpuric (1); conjunctivitis in some
Perry et al[34]	28	2	Generalized erythematous maculopapular (2)
Stewart et al[35]	683	22	3.2% incidence; morbilliform (19); urticarial (2); generalized pruritus (1)
TOTAL	1,461	55	Incidence 3.8 per cent

* Smith's patients were treated with an intravenous preparation of sulfamethoxypyridazine in the farm of Lederkyn, a product of Lederle Laboratories. All other patients were treated with the oral form of sulfamethoxypyridazine.

Numerous individual case reports have also been written of untoward reactions to sulfamethoxypyridazine. The skin eruptions which have occurred have, for the most part, usually been simple erythematous or maculopapular eruptions, mildly pruritic, and often further described as morbilliform or scarlatiniform. Urticarial reactions[9, 10, 11] and petechial eruptions[10] have been seen, and more severe types of cutaneous reactions have occurred in several instances. These include exfoliative dermatitis,[12] erythema multiforme bullosum,[13] thrombocytopenic purpura (fatal),[36] and a patient with progressive, fatal Stevens-Johnson syndrome.[14]

Vesicular and bullous lesions of oral mucous membranes have been present in many of the reported cases[10, 11, 14] as in our patient, making swallowing or eating almost impossible because of pain. Ulceration and secondary infection have occurred. Edema of the eyelids and a mucopurulent conjunctivitis may be seen with the more severe reactions.

When the cutaneous reactions develop during therapy with sulfamethoxypyridazine, in most instances they have occurred during the first 2 weeks of therapy, often within 10 days. There is evidence that rash may develop earlier (within 5 days) in patients who have had sulfonamide in the past even without known sensitivity to the agent.[14]

In several patients the rash has developed within 1 to 5 days after cessation of therapy,[10, 11, 14, 25, 33, 37] a fact which may be explained by the slow rate of excretion of this newer sulfonamide. Detectable plasma levels of the drug may be found at the end of 160 hours (7 days) after a single dose of 2 Gm.,[32, 38, 39] and significant blood levels (e.g., 4.1 mg. per cent) have been found 5 days after the last dose of medication in a 5-day course which included 2 Gm. on the first day and 1 Gm. daily thereafter.[23] Not only may the rash begin after cessation of therapy, but the eruption may progress for days even though the drug is stopped at the first sign of any reaction.

Although Lowell[40] has stated that larger doses of sulfonamides are more likely to give rise to allergic reactions than smaller ones, Lindsay[10] did not find a consistent relationship to dosage in all cases in his series of reactions to sulfamethoxypyridazine, but the incidence of untoward reactions in patients receiving a 1 Gm. daily maintenance dose was 23.7 per cent compared with the incidence of 0.66 per cent of those patients on 0.5 Gm. daily. Tissue concentration of sulfonamide thus appears to be an important factor in the development of allergic reactions.[16]

If a cutaneous reaction appears in a patient on sulfamethoxypyridazine therapy, it is important to stop the drug at once. In many cases the eruption will then regress and completely disappear in from 1 to 14 days, especially in the milder reactions. Steroids have been used in the more severe cutaneous reactions with variable success.[9-12, 14, 37] They have often been combined with other forms of therapy, e.g., antihistaminics, antibiotics, and local therapy. Although the value of steroids has not been conclusively demonstrated, their use seems justified in the more severe sensitivity reactions.

It would naturally seem wise to avoid the use of sulfamethoxypyridazine in any patient who has had a previous reaction to it, although readministration of the agent may not cause another reaction.[10, 24, 41] Often other sulfonamides may be used subsequently without ill effects, but here again there is danger of cross-reaction. It has been stated that hypersensitivity reactions to sulfonamides are highly specific for the particular substance used, but approximately 15 per cent of patients sensitive to one sulfonamide will react unfavorably to any other sulfonamide.[10, 15] The reaction in patients with a previous history of allergic "tendency" may be more severe than in the nonallergic group.[40]

Other types of toxic reactions have been associated with the use of sulfamethoxypyridazine, and 7 fatalities have been associated with its use.[14, 34, 36, 42, 43] The exact incidence of all toxic reactions is difficult to estimate from the literature. Reactions may range from mild ones, such as headache, giddiness, anorexia, nausea, vomiting, or perhaps low-grade fever, to more severe forms, such as the variable cutaneous reactions or leukopenia,[34, 44] thrombocytopenia[36, 44] (1 fatal[36]), focal hepatitis,[37] hemolytic anemia,[34] and aplastic anemia (fatal).[43] Crystalluria occurs rarely.[25, 41] A "hypersensitivity myocarditis" has been reported in 3 patients receiving the drug.[42]

SUMMARY

A severe cutaneous complication of sulfamethoxypyridazine has been reported. It was characterized by a generalized dermatitis of the skin and mucous membrane. The symptoms continued despite withdrawal of the medication and the use of steroids and antihistaminics. Recovery followed the use of large doses of prednisone.

Most of the toxic reactions previously seen with the earlier sulfonamides have now been reported in patients receiving sulfamethoxypyridazine. Although the development of these newer, long-acting sulfonamides represents a valuable advance in therapy, caution must be taken with their use, and physicians who use these agents should be aware of the proper dosage and the indications for sulfonamide therapy. Patients should be carefully followed for evidence of toxic or sensitivity reactions.

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Fatal Nontraumatic Fat Embolism in an Alcoholic

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ALTHOUGH FAT EMBOLISM is generally a consequence of injury, particularly bone fracture, trauma is not a *sine qua non* of this complication. Less widely appreciated is the relatively high incidence of nontraumatic fat embolism in the alcoholic. The paucity of reports in the literature and their restriction, for the most part, to journals of surgery and pathology may account for lack of emphasis upon this potentially disastrous phenomenon.

In 1862 Zenker[1] originally described fat embolism in a crushed railroad worker. Just 17 years later Sanders and Hamilton[2] presented 2 cases unassociated with trauma. Both of their patients died in diabetic coma. Analysis of the literature discloses that although fat embolism occurs classically after fracture of the femur and tibia,[3] it is often observed in burns[4, 5] and soft tissue injury.[6, 7] There are rare reports of its association with metabolic disorders,[8] neoplasm,[4] infections and poisonings,[4] and surgical procedures.[9]

In 1941 Scuderi[10] recognized the increased hazard of fat embolism in the alcoholic. Hartroft and Ridout[11] reported in 1951 that careful study of pathologic material from 30 cases of chronic alcoholism disclosed small amounts of embolic fat in the vessels of the lungs and kidneys in a number of instances. Durlacher and associates[12] presented 25 cases of sudden death occurring in individuals with alcoholic fatty liver. There was no history of trauma or evidence thereof at necropsy. Fat stains were performed on sections of lung, kidney, brain and liver tissues. Pulmonary fat emboli were discovered in 5 cases. These equaled or exceeded in severity the findings in postfracture cases. Rare brain and kidney emboli were observed. A more recent study is that of Lynch and co-workers.[13] They attempted to determine the incidence of fat embolism in chronic alcoholism. In a series of 268 consecutive routine autopsies there were 19 cases of alcoholic fatty liver, all of which had some pulmonary fat emboli. In 2 instances the fat emboli were a clear-cut cause of death, and in 10 others they may have precipitated the final illness. The authors later enlarged their study and discovered that 77.5 per cent of 40 cases of alcoholic fatty liver demonstrated pulmonary fat emboli, while 12 of 14 brains examined contained such lesions. Nineteen cases of cirrhosis were also carefully analyzed. Fourteen had pulmonary fat emboli, while 6 of 9 brains examined contained embolic fat. Lynch noted that, although the central nervous system changes found in association with chronic alcoholism appear to be nonspecific and ill-defined, they could very well be the result of repeated fat embolism to the cerebral vessels.

REPORT OF CASE

Mr. S. M., a 36-year-old white automobile mechanic, was first seen at his home on October 3, 1958. He was coherent and alert. He complained of moderate left lower quadrant abdominal discomfort and scanty urine for the previous 24 hours. Nausea and vomiting had been present for 8 hours, and on several occasions he had vomited blood-tinged fluid. For a week he had experienced intermittent, dull, left lower quadrant pain and had seen gross blood in several urine specimens. There had been injury to the penis 2 years before resulting in a urethral stricture. This caused a small spraylike urinary stream. Following the urethral injury there were 2 bouts of renal colic with the passage of small stones. Neither urologic evaluation nor chemical analysis of the stones was performed.

The patient had not been a consumer of alcoholic beverages until 1950, when he started drinking socially on weekends. He gradually acquired the habit of drinking daily for a period of several months, then abstaining for a similar period. He had a ravenous appetite normally but ate very little when drinking. The average alcohol consumption was 1½ pints of straight gin daily. In February, 1958 he ceased drinking but resumed the habit in July, 1958. He had not reported to work since that time. His wife's efforts to direct him to a physician were fruitless. The only reported previous hospitalizations were in 1952, when he received intravenous fluids for dehydration secondary to alcoholism and in 1955 for "blood poisoning" caused by a leg wound.

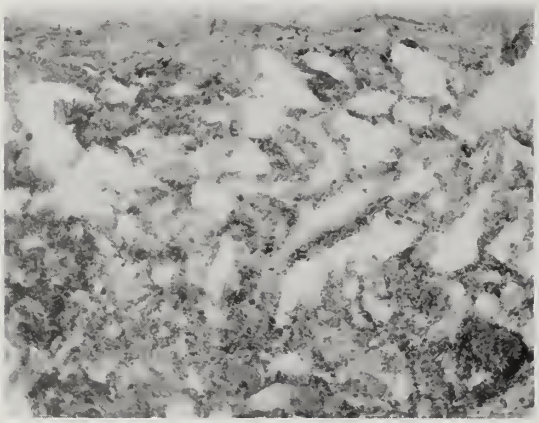

Fig. 1. Disruption of normal lung architecture with fat droplets (black) scattered through parenchyma and within alveoli (Oil-Red-O stain).

Physical examination on October 3, 1958, was negative except for a hydrocele. The reflexes were physiologic and no sensory or motor defects were detected.

Immediate hospitalization was recommended but refused. Since primary urinary tract disease was suspected the patient was instructed to submit the next urine sample for analysis. Nothing further was heard until his wife telephoned 2 days later. She stated that her husband was having difficulty breathing and that he had passed very little urine during the preceding 36 hours. The patient was immediately transported to Suburban Hospital, Bethesda, Maryland. At the time of admission his pulse and blood pressure were unobtainable. Respirations were 34 per minute. He complained only of lower midline abdominal pain. During the examination, however, he noted the sudden onset of total blindness. Funduscopic examination was impossible because the patient's eyes perpetually moved aimlessly about. The lungs were clear to percussion, and auscultation and breath and voice sounds were transmitted normally. Heart sounds were distant but regular, and the apical rate was 144 per minute. The abdomen was flat, and no abnormal masses were felt. Catheterization was performed, but no urine was obtained. Retching produced a small amount of coffee-ground emesis, and bloody feces oozed from the rectum. Intravenous plasma was started, but the pulse and blood pressure remained undetectable. The patient became incoherent and more restless. The extremities became cold and cyanotic, and at 11.00 a.m., approximately 65 minutes after admission, he became comatose. Respirations gradually became slower and more labored, and 2½ hours after admission he expired.

Few laboratory studies were obtained during this short hospitalization. The hemoglobin was 13.6 Gm. per 100 ml., the hematocrit 46 per cent, and the leukocyte count 11,000 per cu. mm. with 40 per cent segmented forms, 27 per cent band forms. 9 per cent juvenile forms, 1 per cent eosinophiles, 1 per cent basophiles, and 22 per cent lymphocytes. The blood urea nitrogen was 22 mg. per cent, the blood ethyl alcohol was 0.04 per cent (postmortem). The blood nonprotein nitrogen was 66 mg. per cent (postmortem).

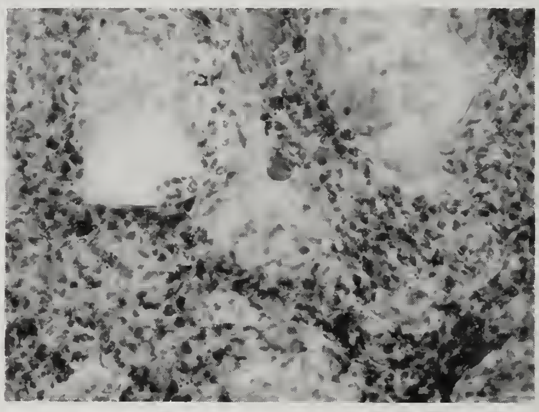

Fig. 2. Intra-alveolar globule of neutral fat (center of field).

An autopsy was performed by Dr. Edward McGarry 2½ hours after death. The only positive findings were as follows: The pupils were irregular and measured 4 mm. in diameter. There was slight cyanosis of the nail beds and several superficial abrasions of the hands. Examination posteriorly disclosed feathery areas of focal atelectasis. The heart showed numerous petechial hemorrhages of the epicardium over the posterior aspect of the left ventricular wall. The esophageal mucosa revealed a moderate degree of hemorrhagic congestion throughout. The stomach was slightly distended and contained numerous small petechial hemorrhages. The remainder of the intestinal tract was negative except for an occasional petechial hemorrhage in the cecum and sigmoid colon. The brain was slightly edematous and the subarachnoid fluid was increased.

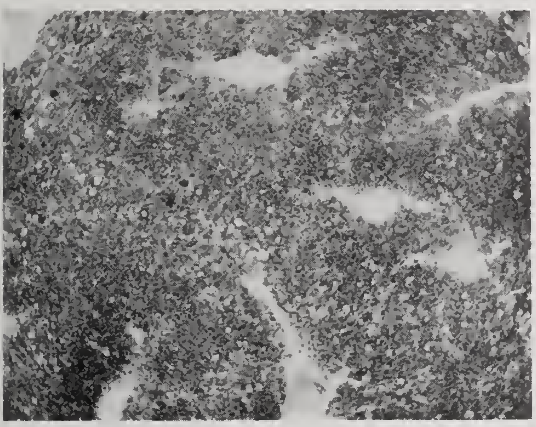

FIG. 3. Widespread fatty vacuolization of hepatic cells (Oil-Red-O stain).

Microscopic examination. Special fat stains were performed in addition to the usual autopsy technics. Multiple sections of the lungs showed extensive focal intra-alveolar hemorrhages. There was no inflammatory cellular infiltrate. There were numerous foci of macrophages containing brown pigment. Oil-Red-O stains of the lungs revealed numerous droplets of neutral fat within capillaries and larger vessels of the lung parenchyma (figures 1 and 2). The heart was normal except for a few foci of small interstitial hemorrhages between the myocardial muscle bundles. The liver showed severe fatty metamorphosis replacing the bulk of the parenchyma (figure 3). The hepatic lobular architecture was retained, however. There was no appreciable fibrosis or scarring. The spleen and pancreas were essentially normal. The renal capillary tufts were congested and many red cells were seen within the glomerular capsule. Numerous foci of intratubular erythrocytes were noted. A diffuse and striking subnuclear vacuolization was seen in the tubules. Oil-Red-O fat stains of the kidneys demonstrated droplets of neutral fat within the glomeruli (figure 4). The subnuclear vacuoles in the tubules were also positive with Oil-Red-O stain. The small arteries and arterioles were essentially normal. The adrenal glands showed a normal microscopic arrangement of cortex and medulla. There were a few small intracortical hemorrhages, but there was no significant necrosis of adrenal cells. The periadrenal arterioles were normal. Numerous sections of the brain were examined, and the only lesions noted were small foci of perivascular hemorrhage within the cerebral cortex. The Oil-Red-O stains of the brain showed an occasional droplet of neutral fat within the small capillaries of the cerebral cortices. Careful study of the other body tissues disclosed nothing of apparent significance.

DISCUSSION

Mechanism of embolization. Despite the fact that hundreds of articles have been written upon the subject of fat embolism since Zenker's original description, opinions still differ concerning the etiology of this phenomenon. The 3 principal theories are: (1) the mechanical, (2) the humoral, and (3) the trigger. The proponents of the mechanical theory assert that fat is liberated at the site of trauma and gains access to open veins. According to the humoral theory, emboli may arise from the physiologic emulsion of fat normally circulating in the blood. Under normal conditions the formed elements of the blood are mutually repellent and stabilized in suspension. The stability of the suspension depends upon the fact that each particle has a hydrated protein shell carrying an electrical charge. Neutralization of the charge or dehydration of the protein shell may lead to agglomeration of the fat particles and consequent embolization. Neutralization of the charge may be caused by stress-induced release of the calcium or magnesium cations or possibly histamine. Dehydration of the protein shell may result from stress via the mobilization

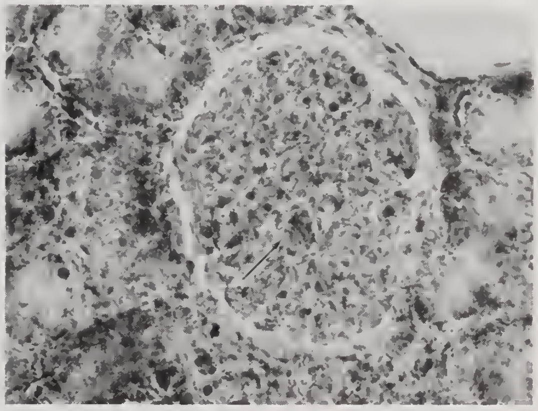

FIG. 4. Embolus of neutral fat (arrow) within glomerular capillary (Oil-Red-O stain).

of lipids, followed by increased lipolysis and consequent increase in the concentration of fatty acids. The trigger theory is based upon the assumption that small amounts of fat on entering veins act as a trigger which disrupts the normal fat emulsion. Experiments of Glas and his associates[14] strongly support the mechanical theory. They demonstrated that the fat from the marrow of a rabbit femur caused fatal fat embolism when injected intravenously into another rabbit of similar size. They also showed that embolism occurred within seconds after a femoral fracture. Using the rabbit, they observed that fat embolism developed in the absence of the adrenals. Contrary to expectations heparin therapy increased the mortality from fat embolism in their experimental animals.

If the mechanical theory is correct, what is the origin of fat emboli in the absence of bone fracture or soft tissue trauma? In cases of alcoholic fatty liver, that organ itself would seem to be the most likely source of emboli. In choline-deficient rats there is little doubt that renal fat emboli originate in the liver.[15] Ruptured fatty cysts have been demonstrated repeatedly to liberate lipids into torn hepatic sinusoids. Fadell and Sullivan[16] reported a case of multiple fat embolism to the brain, lungs, heart and kidneys occurring in massive fatty metamorphosis of the liver due to alcoholism. Microscopic sections of the liver demonstrated numerous fatty cysts. Although their 47-year-old patient died from ethyl alcohol poisoning rather than from the effects of embolism, they thought that their case illustrated a probable mechanism whereby fatty liver could cause changes in the kidneys and possibly other viscera.

Fat embolism in the diabetic. In recent years the peculiarities of fat metabolism in the diabetic have been subjected to close scrutiny. Kent[17] compared the postmortem findings of 53 nontraumatic diabetic cases and 53 nontraumatic nondiabetic controls. Pulmonary fat emboli were found in 24 of the diabetics (45.3 per cent) and in only 11 (20.7 per cent) of the controls. Fatty cysts of the liver were seen in 31 of the 53 diabetics and in only 18 of the 53 controls, and these were considered the source of the emboli. In most cases the emboli were of minimal degree and probably had little clinical significance. They could not, however, be distinguished from those found in traumatic cases. There is growing evidence that the Kimmelstiel-Wilson changes in the kidneys of diabetic men are due to repeated fat embolisms. The glomerular lesions of choline-deficient rats closely resemble those found in the Kimmelstiel-Wilson type of kidney. Since the renal lesions in the rat were known to have been initiated by fat emboli which plugged the glomerular capillaries, Hartroft[15] made a careful search for fat emboli in frozen sections of kidneys obtained at necropsy from diabetic and other patients. In 16 diabetic patients with Kimmelstiel-Wilson renal changes intraluminal fat could be demonstrated within the glomerular capillaries in 12 cases. In these instances fat could also be seen within the pre-glomerular and post-glomerular vessels. Fat emboli were discovered in the glomerular capillaries of only 3 of 22 diabetic patients without Kimmelstiel-Wilson lesions. Hartroft broadened his study to include 20 cases of alcoholic cirrhosis and found fat in the glomerular vessels of 4. None of the alcoholics exhibited golmerular capillary dilatation or lesions resembling the Kimmelstiel-Wilson picture.

Diagnosis. The premortem diagnosis of fat embolism depends upon a high index of suspicion. If there has been bone surgery or any severe injury one is naturally cognizant of the possibility, but nontraumatic cases present more of a challenge. Respiratory distress is a constant feature of the syndrome. Fat droplets obstruct the pulmonary capillaries, interfering with oxygen transport and causing pulmonary hypertension. The lungs may be clear or may contain a few râles. Dyspnea and stertorous respirations develop. Mild apprehension and restlessness, or even delirium and coma, may follow rapidly because of cerebral hypoxia or emboli. Localizing neurologic signs are rather unusual. In the present case the initial symptom was diminished urinary output associated with hematuria. Respiratory symptoms did not develop until several days later and were rapidly followed by changes in the sensorium. Sudden blindness was an unusual feature and presumably was caused by multiple fat emboli in the retinal arterioles. These have been detected ophthalmoscopically in some cases, but in the case under discussion funduscopic examination was impossible and permission for removal of the eyes postmortem was not granted. Neutral fat emboli were, however, found in some of the capillaries of the cerebral cortex, and it seems reasonable to assume that the retinal arterioles were similarly involved. Neutral fats in the blood may be broken down by lipase into fatty acids if the patient survives for 2 or 3 days. These irritating substances damage the capillaries and petechiae form. Petechiae are most noticeable in the conjunctivae and on the upper chest.

X-ray and laboratory studies are very helpful in establishing the diagnosis. X-ray films of the chest occasionally show patchy infiltration, which may be accompanied clinically by fever, cough and chest pain. An increased leukocyte count is often present. A rapid fall in hemoglobin values may be a clue to the presence of fat embolism. Sometimes fat droplets can be found in the sputum. Fat is frequently present in the urine, and it may be easily tested for at the bedside by the so-called "sizzle test." Because of its fat content, the urine exposed to an open flame will crackle and sputter. Serum lipase values may be elevated, and this constitutes a poor prognostic sign. Peltier[18] has recommended phosphin 3 R, a water-soluble fluorochrome, as a diagnostic aid.

Therapy. The therapy of this disorder is notoriously ineffectual. Special attention to the disease or injury initiating the embolization is, of course, imperative. Pipkin[19] recommends oxygen therapy, blood transfusions and alcohol infusion. Oxygen apparently has a favorable effect on both the mechanical and chemical effects of fat embolism. It is best administered under positive pressure. Digitalis should be given to counteract congestive heart failure. Various fat solvents, saponifying agents and emulsifiers have been employed, but alcohol is the only one of proved efficacy. A 5 per cent solution in 5 per cent glucose is administered intravenously. Heparin has been employed without dramatic success and indeed has increased the fatality rate in experimental animals.[14]

SUMMARY

A case of fatal nontraumatic fat embolism in a 36-year-old alcoholic white man has been presented. Fat embolism is common in alcoholics but is rarely the sole cause of death. The emboli appear to arise from fatty changes in the liver. Diabetics are also prone to fat embolism, and the phenomenon may well be the cause of the Kimmelstiel-Wilson changes in the kidneys. In the present case numerous emboli were found in the lungs, brain and kidneys. Renal involvement accounted for the initial symptoms, but death was brought about by pulmonary and cerebral complications. Diagnosis is difficult and satisfactory therapy wanting. In the presence of bizarre renal, cerebral or pulmonary symptoms in an alcoholic, the possibility of fat embolism should be borne in mind.

N.B. I wish to express my appreciation to Dr. Edward C. McGarry, pathologist at Suburban Hospital, Bethesda, Maryland, for his technical assistance and advice.

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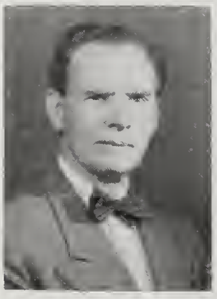
PRESIDENT'S PAGE

REASONABLE AND CUSTOMARY CHARGES



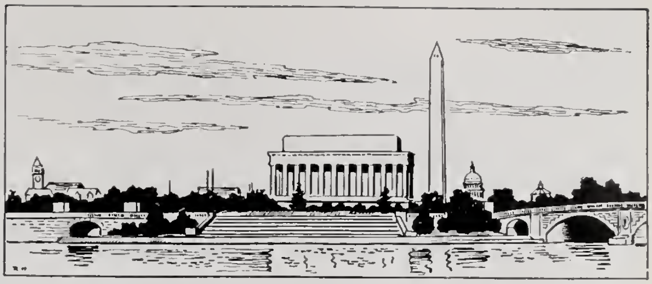
Nearly half of the private patients in this area now have Major Medical health insurance in which "reasonable" and "customary" are the key words relating to charges for "necessary" health services. Accurate determination of subscription rates is possible only when cost of services can be predicted accurately. This means that there must be acceptable fee schedules or there must be a professional mechanism for making just decisions in questionable cases.

Since there are no fee schedules agreed upon for Major Medical programs, it is necessary for organized medicine to determine reasonable and customary limits for charges for necessary physicians' services in all questioned cases.

The Congress which passed the Federal Employees Health Benefits Act requiring the inclusion of Major Medical benefits, the Civil Service Commission which administers the program for the Government, and the millions of Federal employees who are covered by it are all concerned with the manner in which these matters are handled by us. For this reason it is clear that our newly established Review Board, which by Society vote has been directed to determine the extent of Major Medical liability for individual fees, is one of the most important working groups in our Medical Society. It is a group to which each of us owes studied understanding and loyal support. There is no question that the fair and judicious determination of reasonable and customary charges in the interest of the patient as well as the doctor will go a long way toward maintaining general respect for the fee-for-service concept.

The Review Board of the D. C. Medical Society is an essential cog in our wheels of progress.

Donald Stubbs



EDITORIALS

USING PRIVATE PATIENTS FOR TEACHING

Since the shrinkage of beds for indigent patients in hospitals, it has become the mode to use private patients for teaching in university and other large hospitals. This is fine, provided the rules for this activity are wisely applied.

There are two important aspects of this practice—first, it must be established that the responsibility of the care of the private patient is the attending physician's, and, second, the psychologic serenity of the patient must be preserved. The physician in charge of the patient is not only responsible for his patient's physical and emotional welfare, but for his economic welfare as well. All too often the attending physician finds that the intern or resident has "taken over" and is writing orders for the patient, including those for many unnecessary laboratory tests. Furthermore, each morning or evening the patient's room is invaded by 8 or 10 ambitious young students who look with curiosity upon the suffering inmate. Remarks may even slip out that seriously disturb the patient's peace of mind. The patient may be so ill that any intrusion on his privacy may jeopardize his chances of recovery.

We are in favor of the use of private patients for teaching purposes, but we insist that all but routine orders must first be cleared with the attending physician, and that all orders other than routine must be shown on the chart to have been approved by the attending physician. Furthermore, the attending physician's permission should always be obtained to use his patient for teaching purposes. Otherwise the hospital should become a "closed" hospital, in which case it would lose much valuable teaching material, as well as the benefit of the experience of physicians long versed in the day-by-day practice of medicine, which the untried student so much needs.

THE WASHINGTON SCHOOL OF PSYCHIATRY

This spring marks the 25th anniversary of the founding of the Washington School of Psychiatry. On May 8, 1936 a small group of distinguished and dedicated psychiatrists and social scientists banded together to form the School, which has since become famous the world over. As an offspring of the William Alanson White Psychiatric Foundation it was dedicated to "the training of research and treatment personnel from whom signal contribution to psychiatry and the social sciences may reasonably be expected."

The guiding spirit of the founding group was (and to an important extent still remains) the

Opinion expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia

late Dr. Harry Stack Sullivan, whose theories of interpersonal relations, eclecticism, and ideas about interdisciplinary research had far-reaching influence on the theory and practice of American psychiatry and psychoanalysis. A *New York Times* writer, in reviewing one of his posthumous works, referred to Dr. Sullivan as "one of the least known of great men" and as a teacher who practiced "in the bardic tradition." These sentiments are shared by many who read his works or who heard him speak. It should be of historical interest to the members of this Society that Dr. Sullivan spoke often to groups meeting in the Medical Society's auditorium or library.

The phrase "Washington School of Psychiatry" evokes some interesting and possibly relevant associations. Nowadays we do not ordinarily speak of "The New York School of Surgery" or the "Chicago School of Medicine." On the other hand, during the Middle Ages when medicine was in its infancy, operating under the "bardic tradition," we had the "School of Salerno," the "School of Paris," and the "School of Bologna," among many others. In the field of art the tendency to cluster about a "master" was even more marked, and we had the Barbizon School, the Schools of Florence, Venice, Umbria, and so on. The practice of medicine is both a science and an art. This is especially true of psychiatry, which, like medicine, is striving to make yesterday's art the science of tomorrow. Psychiatry for all its remarkable progress is still today in its infancy. Perhaps this fact may help explain the persistence of the "bardic tradition" and the continued usefulness of "schools" of psychiatric thought.

Although the School was founded with highly ambitious, if not grandiose, plans, it has always operated on a shoestring in modest and often makeshift physical surroundings. Cramped quarters, hotel suites, and rented halls were the scenes of some of its most productive conferences. In the past, several of the School's friends from overseas in the course of pointing out its proud record of achievements would also speak of its need for a "locus." In 1958 the School purchased a handsome brick building at 1610 New Hampshire Avenue, N.W., which it has now completely remodeled to fit its needs. On April 7 during the anniversary celebration one of the large rooms was dedicated to the memory of Dr. Sullivan and will be known as Sullivan Hall. The attractive new "locus" houses the offices of the William Alanson White Psychiatric Foundation and its quarterly publication *Psychiatry*, which was originally subtitled a "Journal of The Biology and The Pathology of Interpersonal Relations."

Warm congratulations to the Washington School of Psychiatry on its 25th Anniversary and best wishes for continuing productivity in the years to come!

ZIGMOND M. LEBENSOHN, M.D.
Chairman, Committee on Mental Health,
The Medical Society of the District of Columbia

"... IT'S A LONG, LONG WHILE FROM MAY TO DECEMBER ..."

From the many discussions about the problems of the aged, one thing stands clear—that human dignity, respect, usefulness, and understanding are essential qualities to be sought, no matter what may be achieved in more tangible fields of industry, housing, health needs, and the like.

We talk about a group of people "over 65," and we refer to their problems as those of the "aged." While it is true that a certain segment might appropriately be termed "aged," it is also true that a major portion of those aged 65 to 75 are for the most part physically healthy and mentally keen. If I were one of these members I would take exception to the implications of "aged" in reference to me. Today, with the life span ever-extending and where it is not uncommon for many people to reach 85 and 90 years, we must revise a purely chronologic classification, and relate more to the current characteristics and behavior of this group. Many continue to work productively (and highly so) at ages of 70, 75, or even 80. They enjoy life, a good meal, good fellowship, interesting discussions, entertainment, recreational exercise—the same things we all cherish. Most of them differ from those younger only in that they have slowed down a little physically, they avoid the more hectic, competitive stresses, and are perhaps disappointed that they are not more respected for what they have been and for what they are, but rather are looked upon with a trace of pity.

And respect them we should; they are our revered elders, and wise with the experience of many years of living, tempered by a philosophy of moderation developed over long-time reflection. They know what they want and are keenly aware of the needs of their group, yet they do not ask for or expect too much, and certainly do not feel the world owes them a living. They would much prefer to cope with the economic demands of their time by the efforts of their own minds and hands, if given the chance. Most abhor the concept of retirement (as it has been known) but are victims of outmoded regulations.

Above all, they most certainly must resent being categorized as an underprivileged group, suffering the stigma of a terminal term like "aged" or even the more subtly sympathetic classifications of "senior citizen" or "over 65" or the "golden years" group.

What frame of reference should we use, then, in relating them to all society?

We speak of infants and children, of young people and middle-aged people. What could be simpler or more appropriate than the term "older people"? It carries both dignity and truth. It covers the total group "over 65." Some of them may be aged, and pose their very special problems; there is no objection in referring to that small segment as "the aged." But if I were older and the exigencies of the times demanded my being called something, it is an "older person" that I would prefer being called.

Perhaps it is "a long, long while from May to December," but many of us will "reach September" and, once there, will be obliged to abide with the products and attitudes of our own creating.

Clifton R. Gruver, M.D.
Chairman, Committee on Public Health

THE HEALTH INSURANCE COUNCIL

In 1946, insurance associations, whose membership writes about 90 per cent of the health insurance in the country, came together and formed a federation called the Health Insurance Council. A primary function of the Council is to provide information about health insurance. It is also a vehicle through which mutual problems can be discussed with doctors and hospitals.

In 1957 Dr. David B. Allman, President of the American Medical Association, sounded a vibrant call for action in an address to the health insurance industry at the annual meeting of the Health Insurance Association of America when he declared, after speaking about Major Medical expense insurance, "I am convinced that the vast majority of physicians will coöperate wholeheartedly in the sense of maintaining equitable fees so that your promotion of this type of insurance will not be impeded. I am equally convinced, however, that your industry must step up markedly your program of physicians' relations. You cannot expect physicians to understand fully the relations between fees and the salability of Major Medical insurance. Such a program of professional relations takes money and personnel, but I urge you to undertake it."

This challenge has been accepted by the insurance industry. Committees of local chapters composed of insurance company representatives have been organized in each state throughout the country. Their mission is to seek out the doctor at the grass-roots level and to help and inform him in all matters pertaining to health insurance, and, in turn, to be informed by physicians of their views on the subject. Other activities of the Health Insurance Council naturally include issuance of news releases on benefit payments and extent of health insurance coverages and the preparation of articles for medical and hospital journals on progress and problems of health insurance. Regular bulletins are also sent to hospital administrators highlighting trends in health insurance.

The Council has developed hospital admission plans to certify the extent and kinds of benefits for admitting patients. Simplified claim forms for doctors and hospitals, helping to reduce paper work and to speed up the processing and payment of claims, have also been developed.

Since programs on a national scale seem far removed from the local scene, state committees of the Health Insurance Council were established. At the local level it is easier to deal with problems and misunderstandings, and, of course, to solve them. When this is effectively done, teamwork among insurers, doctors and hospitals is assured. On occasion there is dissatisfaction on the part of a doctor or a hospital with an insurance carrier. Referral of such cases to the local committee chairman usually results in a satisfactory settlement.

A major complaint by the medical profession of insurance has concerned claim forms and paper work. Uniform claim forms were developed by the Health Insurance Council to reduce the problem of paper work. Companies writing the majority of group and individual health insurance coverage have adopted these forms, or plan to do so. Obviously, it requires time for such a program to function effectively. For example, many companies must use up their old forms first. Members of the medical profession can assist in forwarding this program by asking companies to use the uniform form identified by the Health Insurance Council symbol.

Through the local chapter of the Council the physician in this area is assured of: (1) a local point of contact with a majority of the health insurance industry, (2) a point of contact ready to discuss doctors' problems when they arise, (3) a point of contact having liaison with the main policy-making committees of the Council, and (4) a point of contact with a source of informational material available to every doctor on request.

Council committees are anxiously seeking opportunities to meet with the medical profession at all levels. Locally its committees have already had successful meetings with members of the Medical Society's Committee on Medical Care. These meetings have helped to increase mutual understanding of each other's problems and goals.

Local liaison between the insurance companies and the medical profession is regarded by members of the District Chapter of the Council as a continuing program of communications, involving exchange of information and understanding of each other's viewpoints. Specific projects, such as joint committee meetings, program discussions, articles in medical journals, and the like, are directed to this objective.

Frank J. Carbo
Chairman, District Chapter,
Health Insurance Council

THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

IN & OUT OF FOCUS

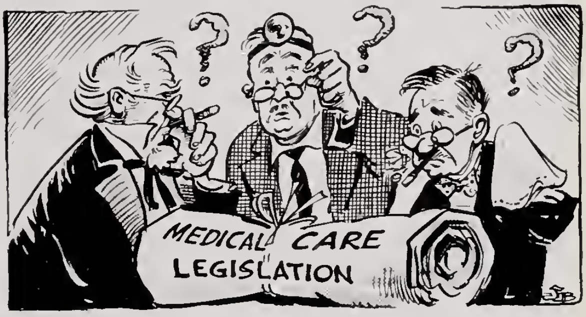
By the Observer

Disturbed Doctors

Probably the complaint most frequently heard among District physicians is that the negative position of the AMA on medical care legislation is the source of the medical profession's poor public relations. Why don't leaders of the Association sit down with high officials in the Administration with the view of coming to an understanding, they ask? Why isn't something done about the unfavorable publicity? There must be some way to counteract it. One member wrote to your Observer recently, "I keep hoping for a really new look within the organization, but I have come to feel that any time I permit myself a little feeling of optimism, it is quickly dashed."

In fairness, it should be pointed out that no one knows how many physicians in the District hold such views. One suspects that the majority do not pay too much attention to the controversy in which the AMA and the Administration are embroiled, although one discovers that even among those who seem to be complacent there is resentment against what is considered unfair criticism of the profession.

As your Observer has pointed out to physicians with whom he has discussed this subject, the situation in the District of Columbia is unique. It is natural that the medical controversy over methods of providing medical care should be focused in the Nation's Capital. After all, here is where the issues will be disposed of one way or another. This is emphasized in the press, which has taken sides for and against organized medicine. More space, it seems, is devoted to medical matters by newspapers in Washington than in any other place in the country. The anti-AMA press often has a field day which at times makes many physicians in the District most uncomfortable.



As to the responsibility of some AMA representatives for this situation, it must be admitted that at times they have seemed distressingly inept. When this has been brought to the attention of headquarters' officials, it has been pointed out that in as large an organization as the Association mistakes are inevitable. Needless to say, there are differences of opinion on this score.

The important thing for physicians to bear in mind is that the general policies of the AMA are determined by the House of Delegates, which meets twice a year. Every state and territory of the United States is represented by delegates in the House. What is not so generally understood is that geography has a lot to do with the position taken by the delegates. State medical societies on the Eastern Seaboard, it seems, are much more liberal in their views than those in the Mid- and Far West. As in any democratic organization, the majority determine the line which the AMA will follow, and in the House conservatives are in control.

As has been reported in this column a number of times, the Medical Society of the District of Columbia belongs to the moderately liberal element in organized medicine. Its position is that the AMA should take a much more affirmative position with respect to providing medical care by the prepayment method. The hope has been expressed by officers of the Society that eventually the Society's progressive proposals will not only be accepted by the House but implemented without reservation. The resolution adopted by the House at the last Clinical Meeting of the Association in Washington last December (see "A Victory Won," In and Out of Focus, January 1961, pp. 33–5) is an example of the progressiveness of the District Medical Society.

Another factor which should not be overlooked by physicians troubled by criticism of the profession is that when an organization takes as strong a stand against Government intervention in medical affairs as does the AMA, vocal indignation by the opposition is inevitable. A majority of the delegates in the House, apparently, are not troubled by this and propose that the Association stand its ground.

Again, it is unfortunate that doctors in the Nation's Capital are situated as they are with respect to the medical controversy. However, the headquarters staff in Chicago has no other alternative but to carry out the wishes of the House of Delegates. It is to be hoped that in the process they win more friends than they lose.

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Medicine Show?

Shortly before these lines were written the Medical Society's Committee on Postgraduate Education held a meeting at which the role of the Society in the education of practicing physicians was under discussion. Among the opinions expressed were the following: It is only logical that the doctor should receive his postgraduate education at a hospital where he works. The Society does not have the facilities necessary to provide continuity in an educational program. The medical school does. Postgraduate lectures presented last year under the Committee's auspices were more of a "show" than anything else. They were given under pleasant circumstances but it is doubtful if those attending retained much of what they heard.

These views were supported by one or more of those present. The implication of the overall discussion was that because conditions had changed greatly since the end of World War II the Society's role in postgraduate medical education was necessarily limited. A member of the Committee proposed that the Society devote most of its attention to general problems of medicine which have become so acute in recent years. Enlightenment of the profession in regard to them, this physician said, was an obligation yet to be fulfilled. However, there was no suggestion that the Society abandon the Midwinter Seminar or the ANNUAL SCIENTIFIC ASSEMBLY, the latter being referred to as attracting many physicians because of its "carnival" atmosphere.

Your Observer called the Committee's attention to the fact that the primary purpose of the Society as set forth in its Constitution and By-laws is the "promotion of the science and art of medicine." In these circumstances postgraduate programs could not be abandoned unless this document was modified by a vote of the Society. He expressed doubt that such action would be taken.

Of particular interest to your Observer was the use of the term "show" to describe the recently Society-sponsored postgraduate lectures. For more years than he cares to admit he has sat through literally hundreds of medical meetings. He has observed at first hand the soporific effect of inarticulate speakers and drab presentations of first-rate scientific material. The reason lack of showmanship. Without it the presentations fell flat. Small wonder in these circumstances the audience became restless, some leaving for their homes or for more pleasurable activities. It did not matter much that speakers had valuable information to impart; the spark which would hold an audience's attention was missing. This may explain in part the falling off in attendance at medical meetings in all parts of the country. Showmanship is too often absent.

Among your Observer's recollections is his early association with a small clinic in Wisconsin. The head of the clinic was a surgeon who frequently recalled lectures which he had attended given by the late Dr. John B. Murphy, who at the time enjoyed a Nation-wide reputation as a surgeon. Dr. Murphy became a legendary figure, in part because he was a superb showman. He had so impressed the surgeon with whom your Observer was associated that he remembered not only Dr. Murphy as a personality but the important points made in his lectures. It had been many years since the surgeon had heard Dr. Murphy but his recollection of the details of the lectures was still vivid.

Among other "showmen" was the late Frank H. Lahey of Boston. Dr. Lahey barnstormed up and down the country addressing innumerable medical organizations. He was indeed a "trooper" who never failed to attract capacity audiences which listened to him with rapt attention. There are many members of the Society who remember this superb and colorful teacher.

Others who demonstrated showmanship were Drs. Elliott P. Joslin and the late William and Charles Mayo. There were, of course, many others. It goes without saying that many medical educators on the contemporary scene are in this category.

The point of these comments is that without showmanship much of the effectiveness of a scientific presentation is lost on the audience, which soon tires and loses interest. In nostalgic moments physicians recall their instructors in medical school. These are invariably those with unique personalities who had something to impart and did it effectively.

"Show," therefore, when applied to the postgraduate lectures, is not, as your Observer sees it, a derogatory term. On the contrary, if a substantial degree of showmanship is not present, it spells failure.

* * *

Doctors and Auto Safety

In an effort to reduce the shocking death toll due to automobile accidents, the American Medical Association has not only concerned itself with physical standards applicable to drivers but to devices on automobiles which would minimize the danger of serious injury. For several years it has urged the adoption of safety belts. Now comes the announcement that beginning in 1962 the major automobile manufacturers will install belt attachments for the front seats of all passenger cars.

In a recent release to the press, Dr. F. J. L. Blasingame, Executive Vice President of the AMA, commended the automobile industry for its action, stating that it is "a major breakthrough in traffic safety." He also praised the industry for making it easier for everyone to have seat belts installed. One manufacturer has gone a step further, according to Dr. Blasingame, and is supplying seat belts to its dealers for sale at cost.

He called attention to the fact that as long ago as 1954 the AMA's House of Delegates adopted a resolution recommending that automobile manufacturers equip cars with safety belts, and that other safety features be considered in designing automobiles. Unfortunately, he said, the public showed little or no interest. In 1958 the Association, the United States Public Health Service, and the National Safety Council launched a campaign to popularize the use of seat belts. They were joined in the crusade by automobile manufacturers and the Federal Government.

Dr. Blasingame pointed out that traffic accidents rank third, behind cancer and cardiovascular diseases, as a killer of Americans. If safety belts had been used, more than 5,000 lives could have been saved annually and serious injuries reduced by more than 60 per cent. Among the country's youth, in the 15- to 25-age bracket, automobile accidents are the number one killer. Dr. Blasingame called upon physicians throughout the country to give leadership to an educational program.

In a letter addressed to Congressman Kenneth A. Roberts, Chairman of the Subcommittee on Health and Safety of the Committee on Interstate and Foreign Commerce, Dr. Blasingame recommended the inclusion of the following safety features:

Anchorage points for seat belts.

Crash padding of the dashboard, roof and other impact areas.

Improved steering wheel and recessed post; perhaps a collapsible assembly.

Safety door locks on all motor vehicles.

Elimination of protruding knobs, buttons, handles and sharp edges.

Improved anchorage of the seats in motor vehicles. Seats should be high enough to protect the neck and to prevent neck snap injury or whip lash, a frequent result of rear-end collisions.

Improved storage space behind the rear seat. Passengers should be protected from the possibility of injury by flying missiles by the provision of an effective retaining rail or recessed storage space.

Improved systems of intercommunication between drivers of moving vehicles.

Legislation is now before the Congress (H.R. 1341) which would establish sound safety standards. The Association has given its endorsement and support to its passage.

Another organization which is crusading in this field is Consumers Union. In a recent issue of its publication, *Consumer Reports*, CU commends the automobile industry for "a significant contribution to overall safety by improving the handling characteristics of U. S. cars." This has served to "back up the driver when he overdoes things."

However, CU would like to see "industry-wide agreement on noncontroversial advances, a program guaranteeing that all sharp facets—ridges, knobs, etc.—would be eliminated from every car's interior; that every dashboard and front-seat back would be adequately padded with energy-absorbing material; that every top would be capable of withstanding a roll-over without collapsing.

"CU applauds the industry-wide decision to install some seat belt hardware as standard equipment in all 1962 models. At least the move promises to eliminate part of a major obstacle to widespread use—the fact that installation is troublesome and fairly costly.

* * * * *

"But what about passengers in the rear? Seat belts may be bothersome to use, but they do save lives and they should be installed and used religiously by *all* car occupants.

"A seat belt has a dual purpose in the event you're involved in a serious collision. It can keep you from flying forward against the windshield. It also can keep you from shooting out through an opened door, after which your chances of survival are only about 20 per cent of what they are if you stay inside.

"But why should the door fly open on impact? Obviously, it should not, and in a commendable effort the industry got together and installed better door latches on all post-1955 cars. . . . Sprung-open doors remain a major problem, however, indicating clearly that further improvement is necessary.

". . . CU recommends that all car doors be kept locked at all times. (There is some evidence to support the conclusion that locked doors are less likely to be sprung open than doors which have merely been closed.)"

★

. . . A Long Hidden Quarrel . . .

Look Magazine has published several articles in the past year critical of both hospitals and the medical profession. In its April 11 issue there appears another by its Medical Editor, Roland H. Berg, entitled "The Battle for Your Health Dollar."*

In the opening sentence Mr. Berg states that prepaid medical care is here to stay, but he asks, "Who will get your health-insurance dollar —Blue Cross-Blue Shield, the commercial insurance companies or the Federal Government?" He then goes on to say there has been "a long-hidden quarrel between the nonprofit Blue Cross-Blue Shield and the competing commercial insurance companies." Both, he states, "contend that they can meet the problem of medical care for all our citizens. Each questions the other's claims.

"Until recently, the struggle between the commercials and the 'Blues' was limited to minor skirmishes. Some hospitals that favor Blue Cross-Blue Shield refused to recognize commercial health-insurance policies as a guarantee that hospital bills would be paid. On the other side, some commercial insurance companies cut premium rates to attract business from the 'Blues' even if this meant losing money."

According to Mr. Berg, the AMA has not taken sides in the controversy but has suggested "separate meetings between the AMA and each group to work out a solution. But no solution has been reached."

Commenting on the progress of voluntary health insurance in general, Mr. Berg writes:

> "Proponents of voluntary health insurance proudly point out that the number of persons protected by such policies has grown from 76,000,000 to 128,000,000 in the last 10 years. What these advocates do not mention is that, although 72 per cent of all Americans have health insurance, those policies pay only 24 per cent of the Nation's medical-care bills.
>
> "Here are the sad statistics: The total bill for medical care of Americans in 1959 was $18.3 billion. The 7 out of 10 Americans who had health insurance spent $5.1 billion to buy that insurance. In return, they received $4.4 billion in benefits to help pay their medical bills. In short, the insured, along with other Americans, had to dig down in their pockets to pay the balance of the medical bill—$13.9 billion. Many didn't make it; millions of families are still in debt.
>
> "There are many reasons why health insurance does such an inadequate job. Many items in medical care—adding up to about half of our total bill—are not considered insurable by either the 'Blues' or the commercials. Uninsurable costs include such charges as dental care, most drugs and eyeglasses. Primarily, insurance is designed to cover the costs of hospital services and physicians' and surgeons' fees. These charges amounted to about half of the total medical-care bill. But the record discloses that health insurance has paid only 34 per cent of even those charges."

He points out that 78 Blue Cross plans in the country vary a great deal in the coverage provided. Some plans pay up to 180 days of hospital care; others pay as little as 31 days. They vary also, Mr. Berg observes, with respect to the ancillary services covered. (In Washington these are provided by the Blue Shield plan.) This, he continues, is also a weakness of the 68 Blue Shield plans usually sold with Blue Cross.

> "Patients," he writes, "are stunned when their doctors charge them double, triple or even quadruple the amount the policy allows for a particular operation. What they don't realize is that, in most cases, the doctors are legally justified in charging whatever they believe the patients can afford, regardless of the schedule of fees listed in the policy. If patients would read their policies, they would learn that each one clearly states that the fees are binding only if the policyholder's income is below a certain level.

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> The income limitations vary among the different Blue Shield plans—one is as low as $2,400 a year, another as high as $9,000—but the majority of the individual plans stipulate that, unless the policyholder earns less than $5,000 a year, the doctor is not bound to that fee. Since more than half the wage-earners in the Nation have incomes above $5,000 a year, it would appear that millions of Blue Shield policyholders are not getting the protection they think they are buying."

In regard to commercial plans, an analysis of "the financial performance of the voluntary health insurance system" by Agnes Brewster, of the Division of Program Research in the Social Security Administration, discloses, Mr. Berg reports, that commercials "can successfully compete with the nonprofit 'Blues.' " According to Miss Brewster, of every dollar received by Blue Cross in 1959, 93.6 cents was paid out in benefits. The cost of "doing business," therefore, was 6.4 per cent. Blue Shield did not fare quite as well; 89.9 cents of its benefits for every dollar received was paid out for medical attention given subscribers. The commercial companies paid out 90.7 cents of every dollar as benefits. Commercials, she states, were not so impressive in their nongroup policies. In these instances, only 50.9 cents come back to the policyholder as benefits for every dollar spent on premiums.

As an example of the commercials' ability to compete with "Blues," it is stated that of the nearly 1.7 million beneficiaries under the Federal Employees Health Benefits Act, over 400,000 chose the plan offered by the commercials; some 900,000 selected Blue Cross.

Finally, Miss Brewster concludes:

> "The commercials can compete with the 'Blues' because of the way each group rates the risks involved. This also helps to explain the bitter rivalry between the two. The commercials, with long professional know-how in insurance, use an experience-rating system to establish premiums and benefits. They prefer to sell health insurance to groups of workers in industries. Knowing the age range of the workers involved, the commercials can tell from experience what health risks are involved. They can figure more exactly what benefits can be offered and what premiums should be charged, depending on whether the group represents a high or a low risk."

There is much more of this. For example, Dr. Basil MacLean, former president of both the American Hospital Association and the Blue Cross Association, has stated that Blue Cross should take over many of the services now rendered by Blue Shield, and then he adds, "I think Blue Cross could move faster and farther if it got the Blue Shield monkey off its back."

There is no one familiar with the problems of any voluntary health insurance plans, whether they be nonprofit or commercial, who will deny that they have serious shortcomings. On the other hand, their phenomenal progress over a span of very few years is remarkable, and improvements are constantly being made as experience indicates their soundness.

Those who direct the plans are well aware that there are unmet needs. They are also cognizant of the fact that the question of cost is one of the most difficult problems to be solved. After all, the subscriber or policyholder must pay for what he receives.

The question which Mr. Berg raises is whether the Government can operate a health insurance program for less and do it more efficiently. Mr. Berg seems to think so. In his article he calls attention to a study showing that "if the benefits were paid by Social Security through an increased tax, the administrative costs would be lower than through Blue Cross or commercial companies. Through Social Security, 95 to 98 cents of every dollar paid in would be returned as benefits."

Those familiar with the conduct of Government programs are skeptical of such conclusions because there is little evidence that these programs are more efficiently administered than those under private auspices. It is this, plus inevitable controls, which have made many Americans skeptical of a Government system of medical care. Reports from various parts of the country seem to confirm the belief that where their health is concerned people still prefer to take their chances with voluntary health insurance plans.

Finally, it should be observed that commercial insurance companies and the "Blues" in Washington, as elsewhere, are competitors. However, in the District of Columbia competition is on a friendly basis, both recognizing that there are ample opportunities for each. The extent of this friendliness is shown by the fact that both representatives of the "Blues" and the commercials meet with committees of the Medical Society to discuss their mutual problems. This is the situation which should exist throughout the country. Only if this course is pursued is there any assurance that the voluntary method of meeting medical costs will survive.

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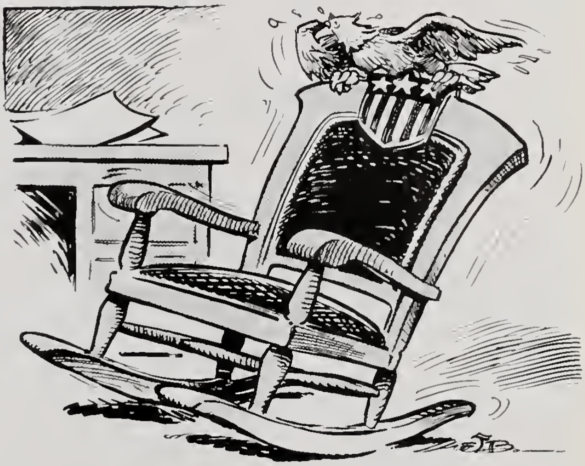
℞ *Rocking Chair*

The old-fashioned rocking chair, it appears, is coming back,—not, as one might expect, for decorative reasons, but for health purposes. Dr. Janet Travell, President Kennedy's Personal Physician, is largely responsible for this, because as long ago as 1955 she prescribed a rocker for the then Senator's back ailment. Publicity attendant upon her prescription has done the rest.

In a recent newspaper article Dr. Travell is quoted as saying that the rocking chair "breaks up tension by keeping muscles moving a little, contracting and relaxing them. . . . I think people will be greatly benefited provided they get a [rocking] chair to fit them." The President's rocker, she pointed out, was built to accommodate his 6-foot frame.

Naturally, Dr. Travell's remarks stimulated sales, which heretofore have been very slim. For example, there is a small company in Asheville, North Carolina, which has for many years manufactured rockers. W. C. Page, Jr., its Vice President, reports that recently the company has received orders from Maine to Florida. "Orders and response," he said recently, "have been tremendous."

Until Dr. Travell's views were publicized, the rocking chair was generally regarded as a symbol of comfort for the aging. Some years ago President Eisenhower said in effect that upon his retirement he would take to the rocking chair, from which he would be dislodged with difficulty. This is not what has happened, although, apparently, this was at one time his intention. However, far less important persons than the ex-President have anticipated the comfort of the rocker in their retirement.



It seems to your Observer that if the rocker, as Dr. Travell states, "breaks up tension" it, rather than a tranquilizer, might well be prescribed for the nervous patient. Aside from the repose which might result, it would encourage reflective thought, which is so much needed in this frenetic age.

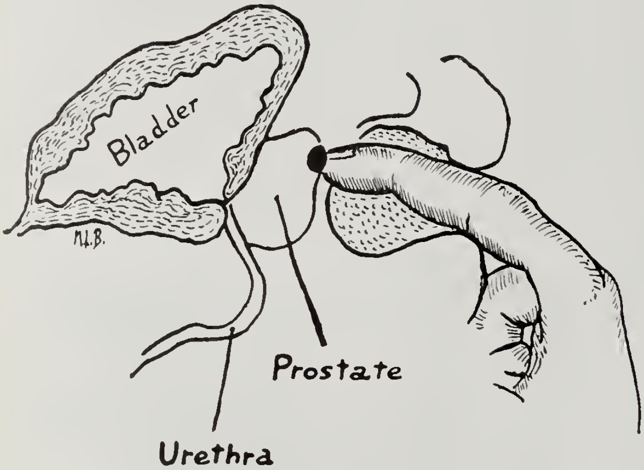
The doctor who bemoans his hectic existence should also find the rocker soothing to his frayed nerves. It would be especially restful to him if he is involved in one continuous round of medical meetings, hospital visits, and office hours. An hour or two a day in a rocking chair might do wonders for him.

T. W.

"In and Out of Focus" will not appear in the June, July and August issues of MEDICAL ANNALS. It will be resumed with the September issue.

CANCER OF THE PROSTATE

Find This



- All males over 50 years of age should have a rectal examination at least once a year.

- Every prostatic nodule should be considered cancer until proven otherwise.

Prevent This

Carcinoma of the Prostate is an insidious disease with no early outward symptoms. In its early stages it is operable, but it must be detected early to prevent metastasis.

A film, "Cancer of the Prostate," portraying the prevalence of cancer of the prostate and the newer methods for the detection and early diagnosis of prostatic cancer, is available for showing to physicians.

Physicians may obtain, upon request, a copy of the Monograph, "The Diagnosis of Genito-Urinary Neoplasms."

Call or Write
AMERICAN CANCER SOCIETY
District of Columbia Division, Inc.
810 18th Street, N. W.
Washington 6, D. C.
EXecutive 3-3690

WHAT IS ETHICAL BEHAVIOR?

W. BENSON HARER, M.D.

Trustee and Councilor of the Pennsylvania Medical Society

We are living in an era of unprecedented scientific and technologic advancement. During the first 60 years of the 20th century more progress has been made in these areas than in all previously recorded history. We have been privileged to witness some centuries-old dreams become realities. We have seen man defy and overcome gravity and put objects in orbit around the earth, the moon and the sun. Some of these objects will continue in a predetermined course for all future time. We have seen both inanimate objects and living creatures put into orbit around the earth and brought back again without harm. The alchemist's dream has been achieved. The physicist has changed one element into another and has created elements previously unknown to man. The atom, previously believed indivisible, has been split and through this a totally new source of power, nuclear energy, has been made available. The magnitude of this power, 2 million times as great as that obtainable from conventional fuels, strains the imagination. Scientific progress in medicine has been equally great, equally spectacular. We need only mention the great advances in cardiac and brain surgery, the successful transplantation of tissue and even whole organs, and the control of contagious diseases.

ACKNOWLEDGMENT

This is the second in a series of talks given at the Forum on General Problems in Medical Practice, held at the Hotel Statler-Hilton in Washington, D.C., October 29, 1960, under the auspices of The Medical Council of the Washington Metropolitan Area. Hosts: Peoples Drug Stores, Inc. Reprints may be obtained upon request from the Medical Society of the District of Columbia, 1718 M Street, N.W., Washington 6, D.C.

When we contemplate such progress, I am afraid many of us develop a state of smug superiority and self-satisfied complacency. Our ego expands. But our ego is completely deflated when we think about the incentive that led to many of these achievements and the almost exclusive actual and potential use to which some of the greatest accomplishments have so far been put—the destruction of man, their very creator.

Man's scientific and technologic achievements are indeed tremendous, noteworthy and gratifying. The use so far made of some of them is scarcely commendable. Man's morality and behavior have lagged far behind his reasoning power and creative ability. Why?

Certainly it is not due to lack of guides or standards. Some of mankind's greatest heritage lies in codes of ethics and law developed long, long ago. These have been passed on from generation to generation over many centuries. They are as applicable today as they were when first conceived by the mind of man, or inspired by the Divine Creator.

Let us briefly consider some of these ancient codes.

1. The Ten Commandments.

According to the Bible these were given by Yahweh (Jehovah, God) to Moses on Mount Sinai and were inscribed by Moses on 2 pieces of stone, previously prepared as commanded by God. They constitute a high ethical code. Few codes in history have been known as widely or have had greater influence.

2. The Golden Rule.

The origin of the Golden Rule is obscured in antiquity. It is found several times in the sayings of Confucius (551-478 B.C.) and in the New Testament in The Gospel According to Luke, chapter 6, verse 31.

3. The Hippocratic Oath.

Hippocrates, the Father of Medicine, lived from about 470 to about 360 B.C. The Hippocratic Oath, sworn to by all physicians, with slight exceptions, can scarcely yet be regarded as out of date. In his first aphorism, Hippocrates said: "Life is short, and the Art is long; the occasion fleeting; experience fallacious, and judgment difficult. The physician must not only be prepared to do what is right himself, but also to make the patient, the attendants, and externals coöperate." A short version of this is often quoted, but most people do not know the source of the quotation nor that it referred to the art of the physician.

Thus we see that ethics, or moral codes of conduct, were established for all people and, through the writings of Hippocrates, specifically for physicians, many centuries ago. With such precepts available one may well ask why it was necessary for the American Medical Association to write and adopt a code of ethics in the 20th century. The answer is simple. We weren't using these codes. If all actions of all physicians at all times were in keeping with the Ten Commandments, the Golden Rule, and the oath and first aphorism of Hippocrates, a separate code of medical ethics and this paper would alike be unnecessary.

Our Public Relations Status

Although the subject assigned to me for discussion today is that of ethical behavior, the system or code of moral actions of the medical profession, another matter of great importance to all doctors, must be considered. It is public relations. The public relations status of our profession is inseparably interwoven with, and dependent upon, the ethical behavior of individual doctors. We are told that the public relations status of the medical profession is at an all-time low. This implies that the ethical behavior of doctors is also low. I don't believe either is true. I believe that our public relations status is rather good and that the image of the modern doctor in the public mind is really more favorable than is often claimed by our detractors. But it is true that our public relations status and the "image" can both be improved, and must be.

The great majority of doctors are dedicated, conscientious, hard-working and highly ethical individuals. Our public relations problems, whatever their magnitude may be, are caused by the thoughtless or improper actions of a very few of our profession. Unfortunately, far more publicity is given to the shortcomings of the few than to the commendable actions of the many.

It seems almost unnecessary to discuss ethical behavior with this group, since I feel sure none of you needs to be reminded of his professional responsibilities. It is regrettable that we have any members within our profession who need to be admonished to mend their ways. It is more regrettable that, in cautioning them, we must subject all members of the profession to the risk of being judged guilty by association.

I cannot believe that more than a very few doctors are deliberately unethical. The great majority of unethical actions are based upon lack of understanding of what should be done or upon thoughtlessness. Unfortunately, the harmful effects on the individual and the medical profession are the same, regardless of the motive or reason.

I believe it is most important to impress on the mind of every physician the effect his individual actions has on the public relations status of the medical profession. If this could be done we would have little cause for worry about ethical behavior and morality.

The principles of morality are immutable. Their interpretation and application are subject to considerable variation. I know something about the time, the effort and the meticulous study that are expended in preparing any AMA statement. I know, therefore, that every sentence, every phrase, every word and every punctuation mark in the AMA Code of Ethics were explored, dissected and debated by a group of the best minds in the medical profession. But the same words mean different things to different people. The AMA Code of Ethics is, therefore, subject to honest differences in interpretation. The Judicial Council of the AMA is charged with the responsibility for official and binding interpretations and for determining whether acts of individual physicians are ethical or unethical. I believe, therefore, that my remaining time can best be spent in a consideration of the broad principles of ethical behavior rather than in interpretations of specific parts of the code of medical ethics.

Community and Personal Responsibilities

Because of their better education and their higher social and economic status, more is expected of physicians than of other segments of the population. The physician was long ago placed on a pedestal. Regardless of what might be said about the present low public relations status of the medical profession, he is still there and wants to remain there. Doctors must, therefore, accept and follow a higher and more rigid code of ethics than is expected of other professions. The standard set by the code applies not only to strictly professional activities but to all aspects of the physician's existence. Let me merely list some of these activities.

1. The Physician as a Citizen.

Citizenship is a many-sided thing. To be a good citizen a physician must obey all laws, pay his full income tax and all other taxes, vote at all elections, and accept his full share of civic responsibilities. In addition, the AMA urges every doctor to engage in political activities in the party of his choice.

2. The Physician and Patients.

The welfare of patients transcends all other considerations. Ethical behavior demands that a doctor provide the best possible medical care at his command, that he confine his medical work to fields in which he is competent, and that the services rendered be limited to those the patient needs. Fees must be reasonable and in line with general economic conditions and the patient's ability to pay. Fees must not be raised because insurance or a medical care plan will pay all or a part of the cost. Consultation should be recommended when indicated.

The relationship between a physician and his patients should be as friendly and close as possible but free of emotional entanglements.

3. The Physician and Prepaid Medical Care Plans.

A physician who elects to render service under a prepaid medical care plan is honor-bound to cooperate wholeheartedly with the plan. Anything less is not in the best interests of patients, the medical profession, the doctor himself, or the plan. The doctor must honor the service benefit provisions of the plan for all eligible beneficiaries. He himself must not misuse a plan and must do all he can to prevent misuse by others. The first aphorism of Hippocrates pointed out this responsibility more than 2,400 years ago, long before the term "third party" had been coined.

Earlier this month I attended the Sixth National Conference of Health, Welfare and Pension Funds Administrators in Miami. At the Monday afternoon session a labor representative made a vicious, unwarranted and unjust attack on organized medicine. Among other things, in discussing abuse of union-sponsored medical care plans, he stated, "I could take an insurance form to any doctor in New York City and get him to sign it for four bucks without even examining me." This man seemed completely unaware of the fact that the dishonest action would be initiated by himself and he would be equally as guilty and as dishonest as the doctor. Nevertheless, all doctors must refuse to be a party to any such act. It takes 2 or more persons to form a conspiracy, and this type of abuse is almost always the result of demands or requests by the union members themselves. In spite of these facts, charges such as these are most frequently thrown in our faces by union leaders. To me, this is just a good example of the higher standards demanded of doctors. If the public relations status of the medical profession is to be raised, we must all conform to these high standards.

4. The Physician and His Colleagues.

I include in this category not only other physicians but also all other purveyors of medical care, such as dentists, pharmacists, nurses, office assistants, and those practicing a medical cult.

Study of the matter has convinced me that a doctor of medicine acts most ethically and accomplishes the most good when he keeps quiet about cultist methods of medical practice. The best attitude he can adopt when a patient mentions a method of medical care in which we do not believe is to "see no evil, hear no evil, speak no evil." Few if any advocates of an irregular method of treatment will change their opinions, regardless of the logic we may employ. The disbelievers need no convincing. Why, then, should we dignify the cult by useless discussion?

The other groups I mentioned are actually our partners in providing medical care. Ethical behavior demands that we treat them as such. Let each group do its proper job with advice but without hindrance from us. The relationship between physicians and such medical ancillary personnel should be characterized by courtesy, consideration and confidence.

I have left until last the ethical behavior of a physician toward his medical colleagues. Never in the past has the medical profession been so harassed by attacks from outside sources as it is today. It is, therefore, more than ever before, important that there be no dissension within our ranks. When a fellow physician is attacked, defend him if you can. If you can't say something good about him, say nothing at all. A veritable wave of malpractice suits is engulfing our profession. A critical word, a look of disbelief, even a raised eyebrow during a patient's recital of real or fancied wrongs at the hands of a fellow practitioner may result in the institution of a malpractice suit against him. If an appeal on ethical grounds fails to secure tolerance toward other doctors, then let me base it on self-preservation. Inevitably, he who criticizes others will himself be criticized.

I should like to discuss one more point in a doctor's relationship with other physicians, that of the patient who drifts from one doctor to another. Years ago no ethical doctor would think of accepting a patient known to be a patient of another physician without calling the other physician and informing him of the patient's desire to change doctors. This courtesy is rarely extended today. It seems to be the attitude of practically all doctors that any patient may be accepted without informing the previous attending physician. Probably I am old-fashioned, but I believe doctors and patients alike suffer as a result of this discourteous, if not actually unethical, practice. It is impossible for any doctor to satisfy all patients. A certain amount of change-over from one doctor to another is inevitable. Furthermore, it is unquestionably the right of any person to select his physician and to change from one physician to another. But the right can be abused. All too frequently the change is made to avoid payment for services rendered by the first doctor. This situation would be disclosed if the new doctor talked to the preceding physician. When a change in doctor is made for some other reason, discussion between the two doctors would usually be of great value to both doctors and to the patient. In any event, a more friendly relationship would be established or maintained between the doctors. Call it what you will, such ethical behavior or old-fashioned courtesy would pay big dividends.

SMA AUXILIARY OFFICERS

Mrs. George William Ware (left), new President of the District of Columbia Auxiliary to the Southern Medical Association; Mrs. Kalford W. Howard (center) of Portsmouth, Va., President of the Woman's Auxiliary to SMA; and Mrs. Henry Amiss Hornthal, retiring President of D. C. Auxiliary to SMA—at the Doctors' Day Reception in the Medical Society's Library, March 30.

There is literally no limit to what might be said about ethical behavior. In the time allotted to me today I have been able barely to touch on some of the more important aspects of the matter. Probably many of you feel I haven't said anything that will help you decide on a course of action that will be generally considered as ethical, that I haven't been specific in my discussion. This is true. But I have spoken in generalities for a very definite reason. I do not believe anyone can or should try to tell anyone else just how he should act in a given set of circumstances. I certainly don't want to be a dictator to others or a judge of others. Furthermore, I firmly believe it is completely unnecessary to try to establish specific rules and specific directions for ethical action. In the matter of ethical behavior we must be concerned with principle rather than anything else. All doctors are intelligent, highly educated individuals. As such they know right from wrong. Under unusual circumstances, where the proper course of action is not clearly discernible, a doctor can be sure his actions will be ethical if he follows the precepts of the Golden Rule, the first aphorism and Oath of Hippocrates, and "lets his conscience be his guide."

DOCTORS' DAY 1961

The District of Columbia Auxiliary to the Southern Medical Association entertained physician-members of the Eighty-seventh Congress and their wives at an early evening reception on Doctors' Day, March 30, in the Library of the District of Columbia Medical Society. At the head of the receiving line was Mrs. Henry Amiss Hornthal, President of the Auxiliary.

Dr. and Mrs. Kalford W. Howard, of Portsmouth, Virginia, were among the honored guests. Mrs. Howard is President of the Woman's Auxiliary to the Southern Medical Association.

In keeping with the purpose of the Day, which is to honor physicians both living and dead, the Auxiliary elected this year to honor the memory of Dr. William Thornwall Davis, renowned Washington ophthalmologist who died in 1944. At the reception Mrs. Davis was presented with a bouquet of red carnations. Their son, Dr. William J. G. Davis, who is distinguishing himself in the same specialty as his father, and Mrs. Davis were also among the honorees.

RED CARNATIONS FOR MRS. DAVIS

Mrs. William Thornwall Davis was presented with a huge bouquet of red carnations at the Doctors' Day Reception in tribute to her husband, famed Washington ophthalmologist who died in 1944. Her pleasure is evident.

District Commissioner Walter Tobriner gave recognition to the Day in the District of Columbia by official proclamation and presented officers of the Auxiliary with the framed document in his offices in the District Building.

WILLIAM THORNWALL DAVIS, M.D.

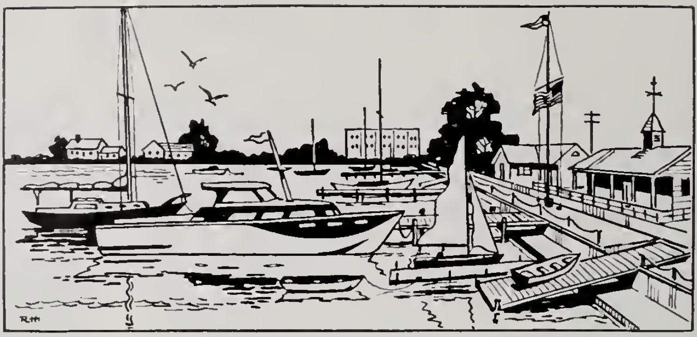
1877–1944

Honored on Doctors' Day 1961

It was Red Carnation Day for patients at Georgetown, George Washington, Sibley and Providence Hospitals and the Washington Hospital Center. The Girl Scouts had made 2,000 red carnations, the official symbol of the Day, and a flower along with a printed legend of Doctors' Day was placed on every patient's tray. Children's Hospital and Walter Reed Army General Hospital presented carnations to their medical staffs.

Peoples Drug Stores and Woodward & Lothrop decorated their windows in observance of Doctors' Day.

Mrs. Francis J. O'Bryan
Chairman, Doctors' Day Committee,
District of Columbia Auxiliary to
the Southern Medical Association



ON THE LIGHTER SIDE

THIS MONTH'S ESSAY is dedicated to those conscientious and hard-working specialists, the proctologists. There are more stories printed about the psychiatrist, but there are more stories *told* about proctology than any other specialty. And herein lies a tale about a patient who had a hemorrhoidectomy and who wrote to his good old buddy about it. The patient shall remain anonymous.

"Dear old buddy:

"Well, I'm out of the hospital at last and feeling pretty good except for my tail light which is still flickerin.'

"I want to pay homage to the most abused and misrepresented part of the human body, namely, the lowly rectum. Just because it is usually out of sight and out of mind don't let anybody kid you about its importance! Although it is the butt of many a joke, and sometimes the helpless target of a swift kick, let us be philosophical about the unworthy treatment given this delicate area and view the subject with a fair and open mind—even if it is below the belt.

"Have you ever had hemorrhoids? Well, old buddy, if you have for gosh sake keep them! Don't ever let anybody get their cotton-pickin' hands on them! I offered mine to science and boy oh boy that was my first mistake. Let me tell it to you the way it happened.

"The night before surgery several deceptive and shady practices took place. First, as an indoctrination and toughening up process, my rear end was shaved dry. Not with lather mind you, but dry. Try it sometime on a day's growth of beard! I had been growing hair south of the border for over 40 years and never knew it existed for as little trouble as it gave me. But when that orderly had finished sandpapering my bottom with that dry dull blade I felt as though I had sat on an exploding firecracker.

"Secondly, to add insult to injury I was given the prescribed enema. Let me say here, old buddy, that from the gleam in that orderly's eye I am convinced he was a sadist. Imagine trying to push a 6-inch rubber tube up into my rectum past those tender throbbing hemorrhoids! And all the while I am bending over the tub like we used to do in the Army when we had prostate examination. But that wasn't the end of it! Nosiree. That fellow finally made it and without a how-do-you-do he released a clamp on a container of water which cascaded into me like Niagara Falls. When he decided that I had had enough he yanked out that tube like them vaudeville fellows do when they yank out a table cloth from under a table load of dishes, and the roar and explosion that followed must have sounded like the blast at Hiroshima when the atom bomb struck.

"That night I had my *big* dinner, namely, toast, tea and bouillon. After that I was given a sleeping capsule which robbed me of my will to go home and forget the whole thing. The next morning when I asked the nurse to please call my doctor and tell him that I had decided against having the operation, another capsule was popped into my mouth. To make doubly sure that I couldn't get away, a shot of morphine was administered. Morphine—the deceiver of deceivers, that seducer of the will power, that false, hypocritical inducer of hollow friendships!

"I was rolled into surgery and my heavy eyes took in the surroundings. There were assorted knives, clamps, scissors, gauze sponges, hooks, baling wire plus interns and pretty nurses with their faces all covered up with masks. I mistook the malevolent gleam in my doctor's eyes for a tender beam of sympathy and at that moment all was right with the world and I was glad that I had come. As a matter of fact, old buddy, I couldn't feel the needle going in, and I didn't care. In a few moments I tasted garlic, and you know I never eat the stuff, and my toes tingled, then everything became a complete blank.

"That, buddy boy, was what they were waiting for. Now they had me where they wanted me and the fun for them began. Of course I didn't know anything for 2 full hours, and when I awoke and saw that pretty nurse standing by I had to brag a little —so I had to open my big mouth and say, 'There's nothing to it.' I realized later that she tried to prepare me for what was yet to come by replying sweetly, 'You're still on a jag.'

"When that same jag began to wear off I found out something I wished I hadn't. It hit me so hard I was afraid to breathe for fear it would hit again. It did. Hot, searing pains in wave after wave permeated my rear end and tore up every nerve in my body. I could have sworn that the doctor had left a red hot poker you know where! Every now and then that sphincter muscle that I had trusted all my life went into a painful, spasmodic, contracting grasp, as though it were trying to get rid of something. Boy it was! Somebody had left a vaseline plug in my exhaust pipe big enough to choke a horse. I couldn't move away from it or escape it; it was there to stay. Every breath seemed to escape through that seething furnace, and I even exhaled around the plug. The nurse gave me another shot of that gay deceiver Morphine, but that only dulled the pain. I swore that I would never eat again.

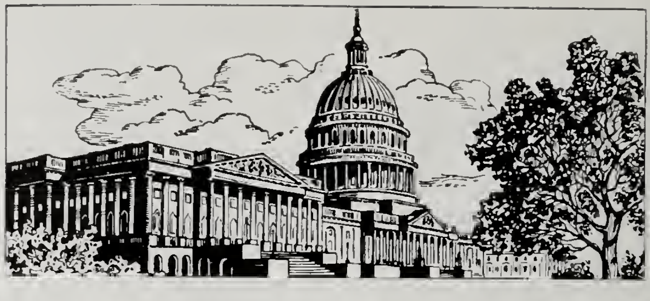
"The next day, without any respect for my operation, the nurse set me in a contraption called the sitz bath. If the water isn't hot enough for the orderly to jerk out his hand red as a boiled lobster it doesn't count. He runs in more scalding water. If I had thought to bring some eggs I could have had hard-boiled eggs to eat while I sat there for 30 minutes twice a day. This undoubtedly is a toughening up process for the things that are yet to come. For instance, did you ever try to pass water against gravity? It can't be done and they know it, so they catheterize you anyway. So with sleepless nights and tormenting days I will come to the part that I really wanted to tell you about.

"After holding back for 5 days, in spite of the soft diet, finally I had to heed Nature's call. Now this is something that you and I take for granted as all in a day's work; but after a hemorrhoid operation this first moving of the bowels becomes a Big Deal. The morning of B-Day a real good-looker comes swishing into my room carrying on a tray what looked like a nice cool gin fizz. I was informed that my vision was bad because this happened to be mineral oil. I laughed because everybody knows that mineral oil is for babies. I had no idea how wrong I was nor did I have any idea what was in store for me until that same afternoon after visiting hours were over. (That was the day you brought me a little snifter, old buddy.) I was feeling no pain but I did have the urge to empty my bladder, so I gingerly stepped out of bed and picked up the urinal and released the muscles which control the bladder. Then I discovered that the mineral oil was a false and deceptive friend. You know how it is, old buddy, when you are urinating you sometimes get the urge to pass a little gas, which I did. Now the John was approximately 2½ miles down the corridor as the crow flies and I couldn't reach the call button; therefore you can imagine what happened when I tried to pass a litte innocent gas! There I stood up to my ankles in a puddle of you know what! When the nurse did arrive to blush at my predicament I was hustled to the John where I experienced that rare sensation of passing broken bottles, old rusty razor blades, molten lead and sulfuric acid nicely garnished with bits of exquisitely prepared barbed wire, porcupine quills and jagged tin cans. To insure complete satisfaction I was treated to an enema that was supposed to clean out anything else that might have snuck up there undetected. This *pièce de résistance* was administered with what felt to me to be a discarded section of fossilized fire hose.

"The next day, after the weakness had passed, I was served with a tray that contained the best-looking food that a hungry man would want, but you know what, old buddy? I couldn't swallow one morsel of that food. I kept remembering that old axiom that my grandpappy taught me, namely, what goes in must come out, and I just wasn't hungry anymore.

"Your faithful friend."

J. Earl Kadan, M.D.



NEWS & PERSONALS

Meetings

The American Medical Association's 110th Annual Meeting, the "world's fair of medicine," is expected to attract the attendance of some 50,000 persons to New York City, June 25-30, about half of them physicians.

The convention theme is "Teamwork in Medicine." More than 350 scientific exhibits will be on display in New York's big Coliseum, along with some 827 technical exhibits. The meeting will open formally on Sunday, June 25, with a luncheon and special preview showing at the Coliseum for AMA officers and committee chairmen, members of the Board of Trustees, representatives of the Pharmaceutical Manufacturers' Association, and invited guests.

More than 2,000 physicians will take part in the scientific program. A highlight of the scientific program will be a one-day meeting on Monday, June 26, sponsored jointly by the AMA and the American College of Chest Physicians. The latter is holding its 27th Annual Meeting in New York just prior to the AMA session.

The first Multiple Discipline Research Forum will be one of the main features of the convention. The forum—embracing 15 branches of medicine—will include reviews of past research, brief reports on new research, and discussions of future trends in research at general sessions Tuesday, Wednesday, and Thursday in the Coliseum.

The second U.S. International Medical Film Exhibition is being coördinated by the AMA Department of Medical Motion Pictures and Television in coöperation with Johnson and Johnson, for showing in Room C of the Coliseum.

The meetings of the House of Delegates will begin at 10:00 a.m., Monday, in the Statler-Hilton, the headquarters hotel. The Medical Society's official representatives at these sessions will be its delegates to the AMA, Dr. Raymond T. Holden and Dr. Ralph M. Caulk, and Theodore Wiprud, Executive Director.

Dr. Leonard W. Larson, of Bismarck, N. D., will be inaugurated as President on Tuesday evening in the Waldorf-Astoria ballroom. He will succeed Dr. E. Vincent Askey, of Los Angeles.

The Woman's Auxiliary to the AMA will hold its 38th annual convention in New York City simultaneously with the AMA meeting. Headquarters will be at the Hotel Roosevelt.

The Ninth Annual Conference on Disaster Medical Care will be a one-day meeting, June 24, at the Hotel Statler-Hilton, developed by the U. S. Air Force Medical Service. This meeting is sponsored by the AMA's Council on National Security.

The 12th Annual Metropolitan Health, Welfare and Recreation Conference is scheduled to be held on May 25 at the Statler-Hilton Hotel. The morning meetings will be devoted to discussions of the housing of older people, the increasing influence of social factors in child health, and how recreation programs can reach out to predelinquent youth and to others who need to make better use of their leisure time.

Further information on the program is available from Mr. Isadore Seeman, Executive Director, Health and Welfare Council of the National Capital Area, 1101 M Street, N.W., Decatur 2-7330.

A Seminar on Obstetric and Gynecologic Pathology will be conducted at the Clinical Center, National Institutes of Health, in Bethesda, May 27, at 2:00 p.m., in conjunction with the Washington Society of Pathologists, the Pathology Section of the Baltimore City Medical Society, and the Southeastern Region of the College of American Pathologists.

Seminar Histologic Slide Sets on Obstetric and Gynecologic Pathology may be ordered. The price is $7.00 per set (10 cases). Check or money order should be made payable to the Washington Society of Pathologists, Inc., and mailed to Mrs. Catherine V. Porter, Laboratory of Pathology, National Cancer Institute, Clinical Center, Room 2-A-29, Bethesda, Md.

General News

Dr. James W. Watts, Chairman, presided at the meeting of the **Executive Board of the Medical Society of the District of Columbia** on March 27, 1961. The Board voted that the annual lectureship proposed by the Liaison Committee with the Clergy be approved and that it be sponsored and underwritten by the Society.

President Stubbs submitted for approval the names of the following members to be added to the Committee on Rehabilitation and Chronic Illness: Drs. Stacy L. Rollins, Jr., John F. Potter, Paul B. Cornely, John D. Schultz, and Irene G. Tamagna (*advisor*). These appointments were confirmed by the Board, as well as the appointment of Dr. James G. Sites to serve as consultant to the Subcommittee on Maternal Welfare.

The resignation of Dr. Joseph H. Thibadeau from the Committee on Medical Care was accepted.

The AMA Council on Scientific Assembly invites physicians to submit titles and brief abstracts of scientific papers they wish to deliver at the 1962 Annual Meeting of the American Medical Association, which will be held in Chicago, June 11–15, 1962. The deadline is October 15. Further information may be secured from Dr. Charles Bramlitt, Secretary, Council on Scientific Assembly, 535 North Dearborn Street, Chicago 10, Illinois.

The Section of Ophthalmology and Otolaryngology of the Southern Medical Association announces that it is now accepting papers by physicians of either specialty living in the area of the SMA for consideration for presentation at the next annual meeting, to be held in Dallas, Texas, November 6–9, 1961.

The paper or an abstract of the paper may be sent directly to the Secretary, Dr. Albert C. Esposito, Suite 1212, First Huntington National Bank Building, Huntington, West Virginia, as soon as possible.

SKYLINE OF NEW YORK

Where the AMA will hold its 110th Annual Meeting in June

Creation of the new **Joint Commission for the Promotion of Voluntary Nonprofit Prepayment Health Plans** was announed in the March issue of the MEDICAL ANNALS. Dr. James Z. Appel, of Lancaster, Pa., a representative of the American Medical Association, was named Chairman for one year at an organizational meeting in Chicago in March.

The Joint Commission was organized by the American Hospital Association, the American Medical Association, The Blue Cross Association, and The National Association of Blue Shield Plans, with 3 representatives of each organization to constitute the Commission.

Among the appointees of the American Hospital Association is Dr. Jack Masur, Director of the Clinical Center in Bethesda, Md. Dr. Donald Stubbs, of Washington, President of the Medical Society of the District of Columbia and Chairman of the Board of Directors of the National Association of Blue Shield Plans, is one of the 3 representatives of Blue Shield.

The ultimate aim of the Commission is to provide more extensive sound health care financing for the American people.

The Washington Psychiatric Society held its annual meeting, March 17, at the D. C. Medical Society building. Dr. Robert H. Felix, President of the American Psychiatric Association and Assistant Surgeon General of the Public Health Service, addressed the membership on "Recent Trends and Developments in Psychiatric Research."

The following officers were elected:

Dr. Sidney Berman, *President-elect;* Dr. Leon Yochelson, *Secretary;* and Dr. Morris Kleinerman, *Treasurer.*

Dr. Hewitt Varney will assume the presidency of the Society in May. Dr. Berman will take office in 1962.

Following the annual meeting of the Board of Trustees of **Group Hospitalization, Inc.,** Dr. F. P. Rawlings, Jr., President, announced the election of four new officers. They are: Mr. Howard W. Kacy, President of Acacia Mutual Life Insurance Co., First Vice President; Dr. Ralph D. Whitley, Second Vice President; Mr. Douglas R. Smith and Mr. J. Russell Bolton, President and Vice President of the National Savings and Trust Company, respectively, Treasurer and Assistant Treasurer.

Three new trustees were elected to the Board for 5-year terms. They are: Dr. Brooks G. Brown, appointed by the Medical Society of the District of Columbia to succeed Dr. A. Magruder MacDonald; Mr. Henry W. Herzog, Treasurer of George Washington University, appointed by representatives of participating hospitals to succeed the late Charles D. Drayton; and Mr. F. Howard McGuigan, President of Retail Store Employees Union, Local 400, AFL-CIO, appointed by the D. C. Commissioners to succeed Mr. Alfred G. Neal.

The Washington School of Psychiatry celebrated the 25th anniversary of its founding on April 7 with dedication ceremonies in its new headquarters at 1610 New Hampshire Avenue, N.W. The hall on the second floor was dedicated to Dr. Harry Stack Sullivan, who was the founder and guiding influence of the School. Dr. Dexter M. Bullard, President of the William Alanson White Psychiatric Foundation and director of Chestnut Lodge Sanitarium, took part in the ceremonies.

On April 8 a banquet in celebration of the anniversary was held at the Shoreham Hotel. Dr. Brock Chisholm, the first Director-General of the World Health Organization, gave an address on "Our Changing Responsibilities." An editorial appears in this issue of the MEDICAL ANNALS, written by Dr. Zigmond M. Lebensohn to commemorate the recent anniversary celebration.

Dr. Harold W. Schnaper has been appointed to the newly created post of Chief of Research in Internal Medicine for the **Veterans Administration** at its Central Office in Washington.

Dr. Schnaper has been serving as Assistant Director of Professional Services for research and education and Assistant Chief of Medicine at the Mt. Alto Hospital. He also is Assistant Professor of Medicine at Georgetown University School of Medicine.

In his new post he will coördinate the VA's multi-hospital coöperative studies in high blood pressure, hardening of the arteries, diabetes, gastroenterology, endocrine disorders, and automatic cardiovascular data processing and the Agency's individual research projects in internal medicine, Nation-wide.

Dr. Martin M. Cummings, Chairman of the Department and Professor of Microbiology of the University of Oklahoma School of Medicine, has been selected to head the new Office of International Research at the **National Institutes of Health.** He will assume his new duties on July 1.

Grants in the amount of $13,500 were recently awarded **to two Washington institutions by the Damon Runyon Memorial Fund.** Dr. Paul R. McCurdy, Assistant Professor of Medicine at Georgetown University School of Medicine, accepted a check of $12,500 to use for blood cell research. Dr. William R. Duryee, Research Professor of Physiology at George Washington University School of Medicine, received $1,000 to be used in the study of certain virus-like agents affecting cell nuclei. The checks were presented on behalf of the Fund by Mr. J. Edgar Hoover, Director of the Federal Bureau of Investigation.

Dr. McCurdy is an Active member of the D.C. Medical Society.

The Bel Pré Nursing and Convalescent Home in Silver Spring, Maryland, opened on May 1. This institution, privately financed by physicians, received planning assistance from the Department of Health, Education, and Welfare. Situated on a 15-acre plot at 2601 Bel Pré Road, adjacent to the Argyle Country Club, the building is completely fire-proof and of the most modern construction. Forty patients can be accommodated. The Home, staffed by registered, licensed nurses round the clock, will be under the direct supervision of Drs. Max G. Sherer, David H. Rosenfeld, and Milton Kogan.

Personals

Dr. Seymour Alpert, Associate Professor of Anesthesiology at George Washington University School of Medicine, received the Merit Award of The Jacobi Medical Society, February 4, for outstanding contributions in the field of community welfare as well as in medicine. The Award was made at the Annual Banquet of the Society at the Hotel Statler-Hilton.

Dr. Harold Stevens, President of the Society, presided at the meeting. The guest speaker was the Honorable Arthur J. Goldberg, Secretary of Labor. Many distinguished guests were present, including medical representatives of the various Government agencies as well as of the Armed Services.

Dr. Jed W. Pearson has been notified of his election by the General Alumni Association to the Board of Trustees of DePauw University, Greencastle, Indiana. He will take office in October, to serve until 1965. Dr. Pearson graduated from DePauw University in 1934 and received his medical degree from Indiana University in 1938. He is Associate in Obstetrics and Gynecology at George Washington University School of Medicine.

Dr. Worth B. Daniels was nominated by President Kennedy to be a member of the Board of Regents of the National Library of Medicine, to complete the term of Mrs. Eugenie Mary Davie, who resigned. The Senate confirmed the nomination on March 16. When the Board of Regents was created in 1956 Dr. Daniels was appointed for a one-year term, during which he served as the Board's first chairman.

On March 30 the Senate confirmed the nomination of **Dr. Hugh H. Hussey, Jr.,** Dean of Georgetown University School of Medicine, one of three members who have been serving on the Board under interim appointments since last August.

Dr. Raymond A. Osbourn and Dr. William B. Walsh were among the Georgetown alumni who received public service awards at the 11th Annual Alumni Awards Luncheon of the Georgetown University Club of Washington, held at the National Press Club on March 17.

Dr. Osbourn is Past President of the Georgetown Club. Dr. Walsh is President of the People-to-People Health Foundation.

Dr. Allen S. Cross, Medical Director of the U. S. Government Printing Office, was one of 73 Federal aviation medical examiners who attended and

CALENDAR OF SPEAKERS

The following members of the Medical Society of the District of Columbia have addressed lay groups during the past several weeks. The Society maintains a Speakers Bureau, sponsored by the Committee on Public Information, through which requests for speakers for lay groups, including radio programs, can be filled.

Date	*Speaker*	*Subject or Title*	*Organization*
February 28	Dr. Julius Schreiber	The Emotional Needs of the Middle School Child	Parents Association of Sidwell Friends School
March 28	Dr. J. Rogers Young	Emergency Room of a Hospital	Inga's Angle, WRC-TV
April 3	Dr. Arthur B. Wein	Posture and Poise	Inga's Angle, WRC-TV
April 4	Dr. Paul Jaquet	Asthma	Inga's Angle, WRC-TV
April 6	Dr. Robert Stolar	Lip Makeup and Corrective Therapy	Inga's Angle, WRC-TV
April 7	Dr. Jean H. Menetrez, panelist	The Alcoholic as a Parent	The National Council on Alcoholism
	Dr. Anthony Zappala, panelist	The Alcoholic as a Citizen	
	Dr. Charles W. Thompson, panelist	The Alcoholic as He Sees Himself	
April 8	Dr. K. Elizabeth Parker	"The Seven Ages of Women"	Chevy Chase Branch of National League of American Pen Women
April 10	Dr. Allan B. Coleman Dr. Charles E. Fierst Dr. Reginald S. Lourie Dr. Robert H. Parrott Dr. Joseph W. Peabody, Jr.	Better Health for Your Children	Medical Special Events, WTTG-TV
April 10	Dr. Samuel Burtoff	Plastic Surgery of the Ear and Nose	Inga's Angle, WRC-TV
April 11	Dr. Alvin Seltzer	New Thoughts in Treating Hay Fever	Inga's Angle, WRC-TV
April 13	Dr. Naomi M. Kanof	Care of the Scalp	Inga's Angle, WRC-TV
April 17	Dr. Bennett Olshaker	Teen-age Maturing	Inga's Angle, WRC-TV
April 18	Dr. Lawrence E. Putnam	What New Antibiotics Are There?	Inga's Angle, WRC-TV
April 24	Dr. Clark P. Halstead	Low Calorie Living	Inga's Angle, WRC-TV
April 25	Dr. Adolph A. Friedman	Gland Deficiency	Inga's Angle, WRC-TV
April 27	Dr. Jack Crowell	Obesity	Inga's Angle, WRC-TV
May 1	Dr. William H. Cooper	The Menopause	Inga's Angle, WRC-TV

successfully completed a 3-day medical seminar at Harvard Medical School in Boston, March 15–17. The course was sponsored by the Federal Aviation Agency, Bureau of Aviation Medicine, the Guggenheim Center for Aviation Health and Safety at the Harvard School of Public Health, and the Harvard Medical School.

Dr. George E. Schreiner has been appointed to the Health Scholarship Committee of the District of Columbia Chapter of the National Foundation.

Dr. Maurice H. Friedman is a newly elected trustee of the Equitable Life Insurance Company of Washington.

Books Received

Acknowledgment is made of the following books which have recently been received. Selections will be made for more extensive review in the interest of our readers and as space permits. Physicians are urged to submit reviews of additional books which, in their opinion, merit comment.

Surgical Diseases of the Chest. Edited by BRIAN BLADES, M.D., Professor of Surgery, The George Washington University School of Medicine, Washington, D. C.; Chief Surgeon, The George Washington University Hospital, Washington, D. C. Price, $22.00. Pp. 580, with 267 illustrations. St. Louis: Mosby, 1961.

Beloved Professor: Life and Times of William Dodge Frost. RUSSELL E. FROST. Price, $3.75. Pp. 350, illustrated by photographs. New York: Vantage Press, 1961.

The Great Epidemic. A. A. HOEHLING. Price, $3.95. Pp. 217, with illustrations. Boston: Little, 1961.

The Human Frame. GIOVANNA LAWFORD, with a Foreword by Dr. Margaret Mead. Price (paper), $.95. Pp. 108. Garden City, N. Y.: Doubleday, 1961.

Culture Methods for Invertebrate Animals. A Compendium prepared coöperatively by American zoölogists under the direction of a committee from Section F of the American Association for the Advancement of Science: JAMES G. NEEDHAM, Chairman; PAUL S. GALTSOFF, FRANK E. LUTZ, AND PAUL S. WELCH, assisted by many specialists whose names appear in connection with their respective contributions to this volume. Price (paper), $2.75. Pp. 590. New York: Dover. 1960.

What Price Medical Care? A Preventive Prescription for Private Medicine. DOCTOR THE RT. HON. SIR EARLE PAGE, G.C.M.G., C.H., M.B., CH. M., F.R.A.C.S., F.R.C.S.(Hon.), D. Sc. (Hon.), M.P.. Chancellor of University of New England, the author of the Australian National Health Plan, a former Prime Minister, and Minister for Health of Australia. With an introduction by E. A. vanSteenwyk. Price, $3.50. Pp. 160. Philadelphia and New York: Lippincott, 1960.

Mathematical Biophysics: Physico-Mathematical Foundations of Biology, 3rd revised ed. N. RASHEVSKY, Professor and Chairman, Committee on Mathematical Biology, The University of Chicago. Volume 1, 488 pp.: volume 2, 462 pp. Price per set (paper), $5.00. New York: Dover, 1960.

Stroke—A Study of Recovery. DOUGLAS RITCHIE. Price, $3.50. Pp. 192. Garden City, N. Y.: Doubleday, 1961.

Cardiovascular Dynamics, 2nd ed. ROBERT F. RUSHMER, M.D., Professor of Physiology and Biophysics, University of Washington Medical School. Price, $12.50. Pp. 503, illustrated. Philadelphia: Saunders, 1961.

A Synopsis of Contemporary Psychiatry, 2nd ed. GEORGE A. ULETT, B.A., M.S., Ph.D., M.D., Professor of Psychiatry, Department of Psychiatry and Neurology, Washington University School of Medicine, St. Louis, Mo.; Director of Psychiatric Services, Hospital Division, City of St. Louis, St. Louis, Mo.; Medical Director, Malcolm Bliss Mental Health Center, St. Louis, Mo., AND D. WELLS GOODRICH, M.D., Chief, Biosocial Growth Center, National Institute of Mental Health, National Institutes of Health, United States Public Health Service, Department of Health, Education, and Welfare, Bethesda, Md. Price, $6.50. Pp. 309. St. Louis: Mosby, 1960.

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Obituaries

JOSEPH JUSTIN McCARTHY, SR., A.B., M.D.

(1887–1961)

Dr. Joseph J. McCarthy, a Life member of the Medical Society of the District of Columbia, died suddenly, March 15, 1961, at his home, 1600 30th Street, N.W. He had practiced in Washington for more than 40 years.

Dr. McCarthy was a native Washingtonian, born April 3, 1887, to Justin and Mary O'Connor McCarthy. After attending Gonzaga High School, he graduated from both Georgetown College and Georgetown University School of Medicine, the latter in 1911. He interned at St. Francis Hospital in Jersey City, N. J., for a year.

Dr. McCarthy was a general practitioner. He was also a recognized heart specialist and was one of the founders of the Washington Heart Association. He maintained offices in his home until he retired several years ago. He served on the faculty of Georgetown University School of Medicine from 1912 until 1946. His first appointment was Associate Professor of Physiology; beginning in 1920 he taught cardiology, and from 1930 to 1946 was Associate Professor of Cardiology.

He was a member of the American Medical Association and an Active member of the District Medical Society since 1913. He became a Life member in 1954. He was also a member of the American Heart Association, the Washington Heart Association, and the Georgetown Clinical Club. He was one of the founders of the Congressional Country Club and the Belmont Club.

He is survived by his wife, Mrs. Margaret Hogan McCarthy, of the home address; a son, Dr. Joseph J. McCarthy, Jr., an Active member of the Medical Society; and a sister, Mrs. Catherine M. Cluck, of Washington.

ARTHUR NACHLAS, A.B., M.D.
(1906–1961)

Dr. Arthur Nachlas, Washington pediatrician for 26 years, died suddenly while attending a patient, February 12, 1961. He lived and maintained his offices at 5721 Utah Avenue, N.W.

Dr. Nachlas was born in Baltimore, Maryland, July 7, 1906, to Hertz and Rosa Kellman Nachlas. He attended the schools in Baltimore, and received his A.B. degree from Johns Hopkins University in 1928. Four years later (1932) he graduated in medicine from the University of Maryland. He interned at Sinai Hospital in Baltimore and served his residency in pediatrics at the Harriet Lane Home of Johns Hopkins Hospital.

Dr. Nachlas began practicing in the District of Columbia in 1935. He was on the attending staff of Children's, Columbia, and Georgetown Hospitals for several years and had courtesy privilege in pediatrics in all of the Washington hospitals.

For the last 15 years he had served as consultant in pediatrics to the District Board of Education in addition to his private practice. For a number of years he was on the faculty of Georgetown University School of Medicine as Clinical Instructor in Pediatrics. During World War II he enlisted in the Medical Corps of the Army but was honorably discharged for physical disability the same year.

He was elected to Active membership in the Medical Society of the District of Columbia in 1938. He was also a member of the Jacobi Medical Society and the Phi Delta Epsilon fraternity.

Surviving him are his wife, Mrs. Katherine Sonnehill Nachlas, and three sons, Lawrence, Henry and Edwin, all of the home address. He also leaves a daughter, Mrs. Eleanor R. Kamerow, of Rockville, Md.; three sisters, Mrs. Leona Arenson, Mrs. Sadie N. Borden and Mrs. Gertrude Mayer, all of Baltimore; and three brothers, Paul and Bernard Nachlas, of Baltimore, and Dr. M. D'Corsy Nachlas, of Oshkosh, Wis.

Fatal Nontraumatic Fat Embolism in an Alcoholic—Kimble

(*Continued from page 287*)

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OF THE DISTRICT OF COLUMBIA

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BOOK REVIEWS

Handbook of Medical Treatment, 7th ed. Edited by Milton J. Chatton, M.D., Sheldon Margen, M.A., M.D., and Henry Brainerd, M.D. Price (paper), $3.50. Pp. 569. Los Altos, Calif.: Lange, 1960.

This Handbook offers a very practical and concise reference. It contains a brief outline and description of the disease entities and a comprehensive listing of the treatment. The treatments are up-to-date and quite complete. This, like all summaries, is limited in description of the abnormalities, but this is counterbalanced by its small size and its lucid outline form.

The plan of the Handbook is to describe the disease or abnormality briefly and to give an outline of the treatment; for example, ventricular fibrillation is described with causes given. Next is the treatment, including the prophylactic treatment and a note on the surgical and mechanical measures of curing this condition. Symptoms as well as disease entities are also covered, e.g., fecal impaction, flatulence, etc.

This Handbook is an excellent value for what it is and an excellent item to have in your bag for handy reference both in the office and for house and hospital calls.

Thomas F. Cullen, M.D.

The Liver and Cancer: A New Cancer Theory, 2nd ed. Kasper Blond, M.D., F.I.C.S., with a foreword by E. Stanley Lee, M.S., F.R.C.S. Price, $8.00. Pp. 400. Bristol: John Wright & Sons, 1960. Baltimore: Williams & Wilkins, exclusive U. S. Agents.

For 30-odd years the author, who has the background of a surgeon, an experimenter, and a scientist, and, it might be added, a philosopher, has been studying the problems of cancer. As a result of these deliberations he apparently is rejecting all of the orthodox ideas as to the causes of malignancy, such as heredity, infections, relationship to Virchow's cellular pathology, the cancerogenic agents, and the Cohnheim theory of embryonal inclusions. He claims to be carrying on where Peller stopped in his book, "Cancer in Man," published in this country in 1952. He claims to have discovered the law of distribution of cancer, and this has resulted in the conclusion that cancer is caused by toxins carried by the blood stream to the "organs of distribution." Since 90 per cent of the sites of all cancers in adults are draining into the portal vein and are participating in metabolism, he postulates that the toxins that cause the mutation of somatic cells into cancer cells might be nutritional in origin. "Cancer is a nutritional disease and can be prevented only by control of food production, food conservation, and food distribution." Normal metabolism can hardly produce pathologic changes and a "disorder of metabolism can be responsible for cancer." Much of this disorder of metabolism is based on the liver and the distribution or the site of cancer is determined by blood circulation. A bit inconsistent with his philosophy, however, is the acknowledgment that some cancers do have a definite etiology—butter yellow, X-rays, radium, tar, etc., and that cancers from such causes can be prevented.

The entire book is concerned with the defense of his philosophy and a criticism of all other theories. The book is almost entirely philosophic, rather interesting, although a bit irritating in some ways. It is doubtful whether his argument is sufficiently convincing to revolutionize the generally held thoughts, convictions and suspicions as to the cause of malignancy.

J. E. Ash, M.D.

Current Therapy—1961: Latest Approved Methods of Treatment for the Practicing Physician. Edited by Howard F. Conn, M.D.; Consulting Editors: George E. Burch, M. Edward Davis, Vincent J. Derbes, Garfield G. Duncan, Hugh J. Jewett, Clarence S. Livingood, Perrin H. Long, H. Houston Merritt, Walter L. Palmer, Hobart A. Reimann, Ralph Wayne Rundles, and Robert H. Williams. Price, $12.50. Pp. 806. Philadelphia: Saunders, 1961.

This new volume lives up to the reputation of former volumes. It is a handy book for quick reference to bring the busy physician up to date on therapy. Some sections are better than others, but most of the articles are good. They naturally present the author's favorite methods of treatment of the diseases discussed. The work is highly recommended by this reviewer.

Bertram F. Schaefer, M.D.

The Multilingual Manual for Medical Interpreting. Louis R. M. Del Guercio, M.D., and 6 contributing editors. Price (paper), $2.50. Pp. 160. New York: Pacific Printing Company, 1960.

With the migration of many foreign doctors of various nationalities to this country, this book is an extremely important addition to everyone's library. It would be particularly important to the American physician in such centers as Washington, D. C., and New York City, where there is a concentration of foreign laymen. It is fairly comprehensive and gives the English questions that would ordinarily be asked in obtaining a history from a patient together with the foreign translations, principally in French, Russian, and Turkish.

As previously stated, this reviewer believes the book is a definite asset to any medical library and, in fact, should be used as a handbook by interns and residents in areas where there is a concentration of foreigners.

William P. Argy, M.D.

(*Continued on page 22*)

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Book Reviews

(*Continued from page 20*)

Information, Please! For Women Only, incorporating The Dunhill Chart. ALFRED DREYFUS II. Price, $7.50. Pp. 556. New York: Vantage Press, 1961.

This book is unique. The author is an informed layman who has been particularly interested in gynecologic hygiene. In 188 pages he undertakes the monumental task of explaining minor gynecologic disorders, venereal diseases, sexual problems, birth control, pregnancy and birth, and prenatal care. In addition, the Dunhill Chart, a "Rhythm" Method of Birth Control, is explained at length. Several short chapters are devoted to sex crimes, the unwed mother, confusing sex laws in the United States.

A glossary of medical terms is included. An appendix of 365 pages is headed "Progress of Pregnancy Figured for Every Day of the Year." Fully three-fifths of the book is occupied with this unproductive doodling. There is no index.

I find nothing in this book to recommend to the profession. The public will do better to seek this type of information from professional sources.

JED W. PEARSON, JR., M.D.

Blood Diseases of Infancy and Childhood. CARL H. SMITH, M.A., M.D. Price, $17.00. Pp. 572, illustrated. St. Louis: Mosby, 1960.

The field of pediatric hematology has grown into a major subspecialty in the past decade. This is due to some extent to advances in the general field of hematology, but more specifically to increased knowledge concerning blood diseases in the neonatal period and growing child. The latter includes new information concerning such entities as hemolytic disease of the newborn, hyperbilirubinemia, the treatment of iron deficiency anemia, and childhood leukemia. Because of the differences in the incidence, symptomatology and therapy of hematologic diseases between young and older individuals it is difficult to present the pediatric picture adequately in a general hematology text. It therefore seems fitting that a volume devoted to the blood diseases of infancy and childhood should be written by Dr. Carl Smith, who is one of the deans of pediatric hematology and is well suited to be the author of such a work.

In this book he begins properly with the origin and development of blood cells, blood changes during growth, and dyscrasias in relation to maternal-fetal interaction. Several chapters then follow concerning general and morphologic considerations of the erythrocyte and transfusion therapy in pediatrics. Following chapters are devoted to specific pathologic entities, which consist of hyperbilirubinemia and hemolytic disease of the newborn and older child, the anemias, infectious mononucleosis, the leukemia, disorders of the spleen and reticuloendothelial system, coagulation disorders and purpura.

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the following recent books in their full page advertisement appearing elsewhere in this issue:

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Diagnosis and treatment measures for kidney disorders

RUBIN—
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Covers both medical and surgical management

MAYO CLINIC—
DIET MANUAL
Recent advances in food, vitamin and dietary practice

I feel that this is a well written book. It is clear, concise, practical and up-to-date. The references which appear at the end of each chapter are quite extensive and represent the great majority of that which has been written on pediatric hematology. This book is heartily recommended to the student and general practitioner. It is a must for the pediatrician, hematologist, and the pediatric hematologist. A minor criticism is that colored microphotographs would have been more revealing than the black and white figures used.

SANFORD LEIKIN, M.D.

Ciba Foundation Study Group No. 5: Regulation of the Inorganic Ion Content of Cells, in honor of Prof. E. J. Conway. G. E. W. WOLSTENHOLME, O.B.E., M.A., M.B., M.R.C.P., AND CECILIA M. O'CONNOR, B.Sc., Editors for the Ciba Foundation. Pp. 100, with 16 illustrations. Boston: Little, 1960.

This booklet of 99 pages contains papers by 6 different scientists, each paper being followed by informal discussions. The subject matter concerns the measurement of the inflow and outflow of inorganic ions of cells under varying experimental conditions. The findings presented would be of interest to those familiar with this type of work but would be difficult to understand by the average medical reader. A good index and bibliography are presented.

H. H. LEFFLER, M.D.

MEDICAL ANNALS
of the District of Columbia

June 1961 VOLUME XXX • NUMBER 6

The Topical Use of Antihistamines with Steroids in Skin Disorders

A Preliminary Report

RUSSELL J. FIELDS, M.D.
Washington

The history of the use and later disuse of topically applied antihistamines in allergic disorders need not be repeated here. The stories of chloramphenicol, chlorpromazine, and many of the steroids used in various disorders are similar (success followed by a period of caution and further evaluation and finally a revival).

With the antihistamines it has long been recognized that there are many factors involved in their topical application, i.e., the ability of the antihistamines to inhibit the flares of the histamine and allergic wheals.

Vascular flow to an area largely affects the inhibition of the enhancing effect of the whealing, absorption, and diffusion of substances into the skin. Apparently this ability of the antihistamines to affect vascular flow is due to their action on nerve tissue[1] and the associated anesthesia produced. It has been shown that the intramuscular injection of histamine produces a greater than normal increase in skin temperature in such conditions as atopic dermatitis[2] at the sites of predilection of the disease.

In reviewing the literature on the topical effect of hydrocortisone on the skin, Scott and Kalz[3] combined it with C^{12}. They found that within 1 hour after the external application of radioactive hydrocortisone the material was shown to be distributed through the epidermis with a slightly more dense accumulation near the surface. After 2 hours there was a greater accumulation in the basal layer cells, and after 6 hours the material collected to a considerable degree around the blood vessels.

It has been found that cortisone has little or no effect upon the release of histamine from skin tissue. It seems to act on some link or links in the chain of events comprising the delayed type of inflammatory response, such as is invoked by intradermal tuberculin, manganese butyrate, patch tests with atropine, etc. Some changes in the threshold and some changes in the diminution in sensitivity do take place.

Zeller, Randolph and Rollins[4] have shown that histamine antagonists inhibit allergic wheals when administered orally or locally before antigen administration. ACTH therapy affects its clinical relief by altering the hypersensitivity state of the clinical shock organ without influencing gross skin effects. On the other hand, histamine antagonists modify the shock organ and alter skin response.

In view of the known photosensitization produced by some of the antihistamines it is believed that the addition of a steroid to an antihistamine cream modifies this reaction. Further studies in the lessening of cross sensitization by the addition of various steroids are indicated.

Benjamin and Cornbleet[5] in studies on the analgesic effects produced by cortisone and hydrocortisone showed that either of these preparations does have some immediate analgesic effect but that they are inferior to that produced by chlorprophenpyridamine.

With these thoughts in mind, I chose to evaluate the factors causing an increased sensitivity index to the antihistamines (Pyribenzamine* and Forhistal*). Pyribenzamine, a highly effective antihistamine, has been in wide general usage for many years. Forhistal (dimethpyrindene) is an entirely new chemical type of agent exhibiting potent histaminolytic activity with a longer duration of action than many of the most recently introduced antihistamines (chlorprophenpyridamine or dextrochlorpheniramine). I attempted to modify this sensitivity with either of the drugs (Pyribenzamine and Forhistal) when combined with steroids. In this study the 2 steroids used were hydrocortisone acetate and Gammacorten TMA.*

SELECTION OF PATIENTS

Hydrocortisone acetate 1 per cent and Pyribenzamine 2 per cent in a cream vehicle was used in 45 patients with subacute and chronic eczematous dermatitis of the hands, legs and feet. The patients were divided about equally as to sex and were in the 20- to 65-year age group. For the most part the cream was not used in acute vesicular dermatitis. A similar preparation containing Gammacorten TMA 0.05 per cent plus Forhistal 1 per cent was used in another 30 patients. The cases included contact, allergic and neurogenic eruptions. Many of these eruptions were of long standing and had failed to respond to other forms of treatment. Two or 3 applications a day were found to be sufficient for the relief of symptoms.

RESULTS

Results were about equal with either preparation. Relief of the itching was prompt and lasting in 90 per cent of the cases. The lesions improved or disappeared in 75 per cent, with an overall recurrence of 25 per cent. There were no reactions of importance. The creams were well tolerated in 95 per cent of the cases.

The objective and subjective results with the combinations appeared to have been superior to the use of either of the agents alone with a negligible degree of sensitivity or side-reactions of any type. There were no instances in which the dermatitis under treatment was aggravated by either of the creams during the immediate treatment procedures, nor was the dermatitis sensitized to other applications. I believe the combinations were more effective largely because the hydrocortisone or Gammacorten reduces the possible sensitizing index of the Pyribenzamine or Forhistal and permits greater effectiveness of the already known antipruritic and analgesic effects of these antihistamines.

SUMMARY

Two antihistamine-steroid creams and their use in the treatment of subacute and chronic eczematous dermatoses are described. Both of these preparations were found to be superior antipruritic, antiallergic, healing creams.

The combined delayed inflammatory response of the steroids with their inhibition of vascular flow and the associated topical anesthesia of the antihistamine provided in Pyribenzamine with hydrocortisone and Forhistal with Gammacorten TMA cream exert a valuable synergistic effect.

These 2 combinations reduce the sensitizing index of the antihistamines to a point not in ex-

(*Continued on page 373*)

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* Kindly supplied for study by the Clinical Research Division of Ciba Pharmaceutical Products, Inc., Summit, New Jersey.

Tranquilizers as a Source of Intoxication in Children*

ROSELYN PAYNE EPPS, M.D.

Assistant Professor of Pediatrics, Howard University College of Medicine

ROLAND B. SCOTT, M.D.

Professor and Head of Department of Pediatrics, Howard University College of Medicine

No group of drugs, with the possible exception of the antibiotics, has gained such worldwide use in such a short span of time as the tranquilizers. The 1958 census of drug manufacturers showed that the value of tranquilizer preparations shipped by all producers in the U.S.A. amounted to $137,569,000.[1] The practitioner who is engaged in the treatment of children is interested primarily in the therapeutic application of these drugs, but he must also be cognizant of side-reactions or toxic effects which may result either from therapeutic administration or accidental ingestion. Accidents and poisonings currently account for the largest number of deaths from all causes among children in the United States. About 80 per cent of these deaths occur in children under the age of 5 years.[2]

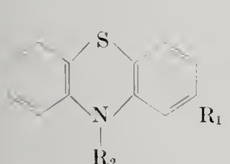
Basic Structure	Name of Compound	R_1	R_2
 Phenothiazine	Chlorpromazine (Thorazine)	—Cl	$-CH_2CH_2CH_2N(CH_3)_2$
	Prochlorperazine (Compazine)	—Cl	$-CH_2-CH_2-CH_2-N\overset{\frown}{\underset{\smile}{\quad}}N-CH_3$
	Promazine (Sparine)	—H	$-CH_2CH_2CH_2N(CH_3)_2$
	Trifluoperazine (Stelazine)	CF_3	$CH_2CH_2CH_2N(CH_3)_2$
	Promethazine (Phenergan)	—H	$-\underset{\displaystyle CH_3}{\underset{\vert}{CH}}-CH_2-N(CH_3)_2$

FIG. 1. Showing the chemical relationship of members of the phenothiazine group of tranquilizer drugs.

Because a discussion of all of the tranquilizing agents would be beyond the scope of this article, attention will be directed to the phenothiazine derivatives. This widely used group of drugs includes chlorpromazine (Thorazine), promazine (Sparine), prochlorperazine (Compazine), promethazine (Phenergan), and trifluoperazine (Stelazine). The basic chemical structure of these drugs is the phenothiazine nucleus. The different compounds are created by altering the radicals (figure 1). By selective competition for enzyme systems these drugs affect the central, autonomic and peripheral nervous systems to produce tranquility, muscular relaxation, etc. as desired therapeutic responses.[3] Since the first pediatric application of chlorpromazine in 1952 to produce artificial hibernation in infants with pronounced neurotoxicity, [4, 5] phenothiazine derivatives have been widely used in children with the following indications:

---

* Presented before the Clinical Meeting of the American Medical Association in Washington, D.C., November 29, 1960.

1. Control of nausea and vomiting
2. Behavior and neuropsychiatric disorders
3. Preoperative medication
4. Miscellaneous: bronchial asthma, tetanus, skin disorders, etc.

Probably the foremost pediatric use for chlorpromazine and prochlorperazine in office practice has been for the control of nausea and vomiting. The capacity of these drugs to control these symptoms is so certain that it is advisable for the practitioner to properly establish the diagnosis of the basic disorder, because disappearance of the warning symptoms may mask a primary disease such as meningitis or acute intestinal obstruction. When chlorpromazine is used as an antiemetic and sedative in obstetrics apparently there are ordinarily no direct toxic effects upon the fetus. However, when used in large doses it may lead to uterine inertia and prolonged labor with undesirable effects upon the newborn.[6]

Although these drugs are chemically related, the nature and severity of the toxicity may vary. Fortunately, such complications of chlorpromazine administration as jaundice and agranulocytosis have appeared much less frequently in the pediatric age period where the duration of therapy is often for a shorter time. Untoward reactions most commonly reported in children receiving the phenothiazine derivatives have consisted of transient drowsiness and neuromuscular disorders.[7, 8] Haggerty[9] reported a case of fatal intoxication in a 13-month-old boy who accidentally swallowed 750 mg. of chlorpromazine (Thorazine). Postmortem examination revealed cerebral edema with markedly increased intracranial pressure but no medullary cone.

The syndrome of motor restlessness appears to be the most common neuromuscular reaction when prochlorperazine is used as an antiemetic or mild tranquilizer. Symptoms may include incessant movement, tapping of the feet, or inability to sit still. This effect is usually transient, but the dosage of prochlorperazine should not be increased while these symptoms are present. If symptoms are persistent, temporary reduction of dosage and concomitant administration of a mild sedative are indicated.

Cases of pseudo-parkinsonism are more frequent in adults, but the condition has occurred in children who were being treated for psychiatric disorders. Usually these patients were taking large doses of the drug over a long period of time. Several observers have noted a parallel between the appearance of pseudo-parkinsonism and clinical improvement of the patient.[10] The manifestations may vary from a masklike facies and some muscle rigidity to a full-blown picture of classical paralysis agitans. It should be mentioned that the phenothiazines are not anticonvulsants and may aggravate an underlying convulsive disorder.[11] Caution should be exercised in administering these drugs to seizure-susceptible individuals.

The most dramatic toxic effect observed during prochlorperazine therapy has been that of the extrapyramidal seizure syndrome. This and other dyskinetic reactions have also occurred during trifluoroperazine therapy where they seem to occur earlier and with greater severity. These extrapyramidal seizures have often been variously misdiagnosed as bulbar poliomyelitis, meningitis, encephalitis, tetanus, brain tumor or epilepsy.[12] They are characterized by episodes of marked drowsiness and lethargy, but consciousness is usually not lost. At times there are oculogyric crises, trismus, torticollis, and extensor rigidity of the back muscles, sometimes progressing to opisthotonos. In some instances the dosage prescribed has been excessive. However, several cases of typical seizures have followed dosages in the recommended range.[13, 14] Adverse reactions following minimum doses probably represent drug idiosyncrasy. The specific treatment has not been established, but when the drug is discontinued, signs and symptoms of toxicity have usually disappeared within 12 to 24 hours.[13]

Because of the widespread use of tranquilizing agents by the adult population, small children are also exposed to the possibility of intoxication from accidental ingestion in the home. The following case which was observed by one of us (R.B.S.) is typical of the type of poisoning which has been reported by others.[8, 15, 16]

Illustrative Case

A 22-month-old girl was in good health except for a recent cold until 2 hours prior to admission to the hospital. At the onset of her sudden illness she became extremely lethargic and fell into a deep sleep. Upon being awakened she refused to talk, exhibited a fixed upward gaze, and on attempting to walk her gait was clumsy and so ataxic that she fell to the floor several times. She was brought to the hospital by her parents, who reported that the child had been given 1 teaspoonful of Benylin Expectorant and 1 grain of aspirin for a cold. The parents had also suddenly discovered that a bottle which previously contained 16 10 mg. tablets (160 mg.) of Compazine was empty. The bottle had been kept on a low table and was within reach of the playing child.

Physical examination on admission to the hospital revealed the following: temperature 98° F, pulse rate 112, respiratory rate 24, and blood pressure 110/70. She was not asleep but was in a state of hypertranquility. At first the pupils were constricted to pin-point size and there was conjugate deviation of the eyes. Later the pupils dilated somewhat and reacted sluggishly to light and there was a persistent, fixed, upward gaze. Periods of nuchal rigidity, opisthotonos and irritability alternated with periods of relative relaxation and quietude when she would carry out commands. At times trismus made it difficult to inspect the oral cavity. There was intermittent difficulty with swallowing and with respiration. The deep tendon reflexes were present and equal bilaterally. Episodes of slow athetoid movements of the right arm were observed.

A lumbar puncture and examination of the cerebrospinal fluid yielded normal findings. Blood counts and roentgenograms of the skull and chest also were normal. The symptoms began to clear on the second day, and she was discharged on the third day in good condition.

Therapy consisted of the use of caffeine and sodium benzoate (0.25 Gm.) intravenously upon arrival at the hospital. Later, dextrose and saline were given intravenously during the period when trismus and opisthotonos interfered with the intake of oral fluids.

Comment

It has been observed from a review of a representative list of cases of intoxication from prochlorperazine reported in children by Shaw and co-workers[17] that the untoward neurologic symptoms are related principally to the extrapyramidal tract (table 1). The neck and upper spine were frequently involved leading to manifestations of torticollis and/or opisthotonos. The lower cranial nerves were frequently involved so that such symptoms as the following resulted: trismus, difficulty in speech, interference with swallowing, disturbed respiration, and drooling of saliva. Toxicity has been observed more often in children when there was a significant acute illness already present such as gastroenteritis, measles, dehydration, etc. In some cases the children appeared to be unusually sensitive to the drugs, so that untoward symptoms developed even when the dosage was within the usual range of tolerance.

The true relationship of neurologic symptoms to drug administration was not always immediately understood or available to the physicians at the time of the child's admission. Prompt recognition of this pseudoconvulsive extrapyramidal tract syndrome from prochlorperazine intoxication is necessary in order to avoid undue parental emotional apprehension and the performance of laboratory procedures of dubious value by physicians. The development of a red-purple color reaction in the urine upon the addition of 10 per cent solution of ferric chloride may be of diagnostic value.[18] A method has been developed for the determination of chlorpromazine in body fluids.[19]

The treatment of the pseudoconvulsive extrapyramidal tract toxic syndrome is essentially symptomatic. The administration of the causative drug should be promptly stopped. The occurrence of these untoward reactions to prochlorperazine can best be prevented by adherence to the revised recommended dosage schedule (table 2). Physicians should also be alert for the child who exhibits unusual sensitivity or idiosyncrasy to the drug.

The neuromuscular reactions (dystonias) usually subside within 24 to 48 hours after the drug

TABLE 1

*Clinical Features of Prochlorperazine (Compazine) Intoxication in Children**

Age (yrs.)	Sex	Amount Ingested	Signs and Symptoms	Therapy	Outcome
6½	F	Suppository 25 mg. (for 2 doses)	Hyperextension of neck and back muscles, conjugate deviation of eyes, abnormal reflexes, ataxia of upper extremities, loud cries, yawning (referred as post-infectious encephalitis).	Sodium phenobarbital	Recovery
9	M	5 mg. tablet T.I.D., a.c. (8 doses)	Generalized tonic seizures, lasting 30 to 60 seconds, in which the head was drawn violently backward and toward the left, the neck and upper back were severely arched, both hands and the right foot were in rigid carpopedal spasm; eyes turned to the left and pupils widely dilated (referred as polio or meningitis).	Phenobarbital 130 mg. I.M. and 6 ml. paraldehyde in saline solution rectally	Recovery
2½	M	15 mg. (1 dose)	Shaking movements of the head, stiffness of the arms and neck and left side of the trunk. Frequently recurring extensor spasms of the upper and lower extremities; positive Brudzinski bilaterally (referred as case of possible meningitis).	Phenobarbital	Recovery
9	M	15 mg. Spansule (2 doses)	Vomiting and intense spasm of the neck muscles with the head turned violently to the right; inconstant severe trismus. The right upper extremity was held rigidly in extension. Difficulty in swallowing and respiration; unable to speak because of spasm of the muscles of the throat, tongue and jaws (admitted as post-measles encephalomyelitis).	Cogentine 0.5 mg., repeated in 5 hours	Recovery
11½	F	10 mg. (3 doses)	Severe seizure involving neck, face and musculature of the shoulders and became very much agitated. Head thrown violently backward and turned to the side. Seemed not to be completely out of contact with her surroundings, but was extremely frightened and somewhat disturbed (admitted as possible epileptic).	No medication	Recovery
4	F	Suppository 5 mg. (5½ doses)	Listless and unresponsive and had a great deal of drooling with inability to handle oral secretions. Did not have actual convulsive seizures, no definite neck stiffness, and physical findings were otherwise unrevealing (referred to hospital as bulbar poliomyelitis).	No medication	Recovery
13	M	Suppository 25 mg. (4 doses)	Muscular spasms, difficulty in swallowing and respiration. Extensor spasms of the neck and shoulders and masseters (referred to hospital as bulbar poliomyelitis).	No medication	Recovery

* Summarized from Shaw, Dermott, Lee and Burbridge.[17]

has been discontinued. It may be advisable, however, to comfort the patient by the administration of sedatives such as barbiturates or paraldehyde. Caffeine and sodium benzoate has been described as an effective and rapidly acting agent when administered intravenously as an

TABLE 2
Pediatric Dosage of Prochlorperazine
(Recommended Dosage for Nausea and Vomiting)

Weight	Syrup (5 mg./tsp.)	Suppositories (5 mg.)	Not to Exceed
20–29 lbs.	½ tsp. (2.5 mg.) once or twice a day	½ suppository (2.5 mg.) once or twice a day	7.5 mg. per day
30–39 lbs.	½ tsp. (2.5 mg.) B.I.D. or T.I.D.	½ suppository (2.5 mg.) B.I.D. or T.I.D.	10.0 mg. per day
40–85 lbs.	½ tsp. (2.5 mg.) T.I.D. 1 tsp. (5 mg.) B.I.D.	½ suppository (2.5 mg.) T.I.D. 1 suppository (5 mg.) B.I.D.	15.0 mg. per day

antidote for prochlorperazine intoxication in children.[20]

SUMMARY

The phenothiazine derivatives are frequently employed in pediatric practice, especially for the control of nausea and vomiting. These drugs are also widely used in the home by the adult population as tranquilizers. Not infrequently toxic reactions to these agents have been reported in children both from therapeutic administration and from accidental poisoning. The extrapyramidal neuromuscular toxic seizures (dystonias) have often been particularly alarming emotionally to parents and diagnostically confusing at times to physicians. Practitioners who employ these agents for the treatment of vomiting in children should exercise considerable care in the establishment of the primary diagnosis, because these drugs may temporarily mask a serious underlying disease such as meningitis or an acute "surgical abdomen." They should also be thoroughly familiar with the clinical manifestations of drug intoxication or idiosyncrasy, and the parents should be instructed to observe the child closely for side-reactions.

ACKNOWLEDGMENT: Dr. Guadalupe A. de la Rosa assisted with the preparation of the manuscript.

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A Comparative Study of Legg-Calvé-Perthes Syndrome in a Series of Seventy-six Cases*

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Legg-Calvé-Perthes syndrome, a widely recognized but perplexing degenerative disease of the epiphysis of the head of the femur, was brought to the attention of the medical world by 4 physicians working independently in different countries. Jacques Calvé,[1] analyzing cases in the Marine Hospital at Berck, England; Arthur Legg,[2] working at the Children's Hospital in Boston; George Perthes,[3, 4] practicing in Germany; and Henning Waldenström,[5] a Swedish orthopedic surgeon, all presented papers in the early twentieth century illustrating this syndrome.

It was Perthes who, in presenting preliminary studies in 1910 and clinical and bibliographic reports in 1913, popularized the entity to most Americans. The name Legg-Perthes disease gained prestige in the United States through common usage, but the most widely accepted name at present is Legg-Calvé-Perthes syndrome.

In 1954 the most inclusive and comprehensive monograph to date concerning the syndrome was published by Charles Goff.[6] Based on concepts set up by Burrows,[7] the osteochrondroses of youth are seen to involve:

1. Pressure epiphyses, which are components of joints.
2. Traction epiphyses, which serve as bony attachments for tendons and show great differences in rates of ossification.
3. Atavistic epiphyses, which are so designated because phylogenetically they are remnants of formerly full-fledged bony structures that are no longer serving their original function in man.

The classifications, terminology, and final grading as set up by Goff have been adhered to as closely as possible in this presentation.

During the years 1943 to 1957, 76 patients seen by the staff of the James Lawrence Kernan Hospital were given the diagnosis of the syndrome. A comparative study of the roentgenologic and clinical findings was carried on in the spring of 1958. The series comprised 16 girls and 60 boys ranging in ages from 2 to 14 years, including 2 brothers and 5 Negroes, who showed no evidence of sickle-cell disease or trait and who had negative tuberculin skin tests. Thirty-nine cases involved the right hip and 27 the left hip. There were 10 cases of bilateral involvement. The yearly admission rate was 5, with a low of 1 in 1943 and a high of 12 in 1956. The average stay in the hospital was 286 days. In computing the average length of hospitalization it was necessary to disregard patients who were in less than 40 days, since they were present merely for diagnosis and not for treatment.

Etiology

There was very little in the way of conclusive causal relationship which could be obtained from the histories. In 8 cases the parents associated the onset of symptoms with a traumatic experience. Most of the children in the series appeared to be small physically for their ages. Furthermore, on final examination in April and May of 1958 a high percentage of them were still found to be underdeveloped physically. After a nurse commented that few of the children liked meat, all parents were questioned about the diets of their children. Perhaps three-quarters of them reported that the patients refused such foods as meat, eggs, cheese, etc. This apparent dislike for meat and other protein-rich foods points to the importance of investigative work on faulty amino-acid metabolism as a possible cause for this condition.

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* This study was made while the author was a Resident in Orthopedic Surgery at the James Lawrence Kernan Hospital in Baltimore, Maryland.

SYMPTOMS

The most frequently presenting symptoms were limp, pain in the knee, and, lastly, pain in the hip.

Either the case was diagnosed within 3 months after the onset or not until at least 6 months after the onset. Almost one-half of the total number of cases were diagnosed within a 3-month period, but then there was a marked drop until the sixth month. No apparent explanation was found for this experience.

There was a positive correlation between the onset of subjective or objective symptoms and the stage of the condition on initial X-ray examination. Forty patients were admitted with X-ray evidence of early changes, 26 had intermediate stage changes, 7 were already in the healing stage, and 2 were in retrospect normal hips which were misdiagnosed on admission.

X-RAY DIAGNOSIS

The areas in the X-ray films studied in order to determine whether or not the original X-ray films showed changes consistent with the syndrome are shown in figure 1. The changes most frequently observed in cases which were not wholly obvious were:

Waldenström's sign—the wider joint space (fig. 1-A).

Gill's sign—a less dense area in the medial metaphyseal zone (fig. 1-B).

Gage's sign—beginning absorption in the upper metaphyseal zone (fig. 1-C).

The roentgenographic stages which most orthopedists use are taken from the classification of Brailsford[8] (table 1).

In this series, among the patients seen within 4 months of the onset of symptoms, 3 times as many early X-ray changes were found. If between 4 and 9 months had elapsed, there were over 2 times as many with intermediate X-ray changes, and if over 9 months had elapsed, there were 5 times as many with advanced changes.

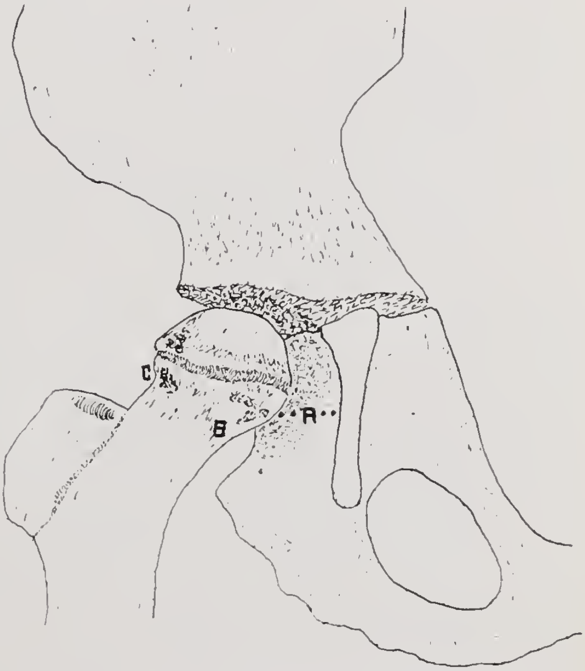

FIG. 1. Diagram showing areas of early X-ray changes (A, B, C).

TREATMENT

The type of treatment used on almost all patients treated in the hospital was as follows:

1. Absolute bed rest with Buck's extension-traction to the affected side until the acute pain was over.

TABLE 1

Roentgenographic Stages

Stage	X-ray Description	Duration of Lesion	Condition of Bone
	Early Stage		
1.	Increase in density of capital femoral epiphysis	2-3 mos.	Becoming plastic
2.	Apparent increase in joint space		
3.	Osteoporosis of metaphysis		
	Intermediate Stage		
4.	Compression of epiphysis	3-18 mos.	Plastic
5.	Beginning of fragmentation		
6.	Further compression and thinning of fragmentary epiphysis		
7.	Fading or beginning absorption of dense portions		
8.	Expansion of metaphysis and widening of neck		
	Healing Stage		
9.	Beginning regeneration of epiphyseal zone	18-48 mos.	Plastic
10.	Absorption completed; areas of rarefied, reossified bone appearing		
11.	Reossification progressing by "creeping substitution"		
	Definitive Stage		
12.	Epiphysis reossified; normal bone trabeculations present	During or after 4th yr.	Consolidated

2. A prolonged period of bed rest of between 6 and 12 months, the patients being allowed freedom to move about in bed but not to stand on their feet.

3. Ambulation with crutches or in a wheel chair.

4. With X-ray evidence of the condition being well advanced into the healing stage, graded weight-bearing.

5. Some limitation of activity until healing appeared to be almost complete.

There were several exceptions to this régime, especially among private patients. Some were allowed earlier ambulation on crutches. Some were allowed to walk with full weight-bearing before the healing stage was even half over. Generally speaking, the results in those who were allowed to walk prior to good X-ray healing were not as good as in the remainder of cases.

Aureomycin in doses of 50 mg. every day was tried in 6 patients for a period of 3 months. There was no appreciable difference between their progress and that of the other children, although we may not have continued the antibiotic long enough to have seen its full value.

RESULTS

To try to list results which could be compared with those of Goff, I accepted his terminology for classifying the final results roentgenologically (table 2).

TABLE 2

X-ray Types

Onset Age/Years	Spheroid			Mushroom			MCJ*	Clinical			
	1	2	3	4	5	6		A	B	C	D
Under 5	5	5	2					4	5	2	
5–8	5	8	7	1	1			6	7	1	1
8–14	1	2	8	3	4	1	2	2	4	6	3
TOTAL	11	15	17	4	5	1	2	12	16	9	4

* Malum coxae juvenilis.

The spheroidal group has 3 components:

1. The head, acetabulum and neck are nearly perfect.

2. The epiphysis is slightly narrowed, the acetabulum rounded, and the neck slightly wider and shorter.

3. The epiphysis is narrow but assumes a broad arc of a circle with a smooth outline. The acetabulum fits the head but is less deep and slightly oblique, and the neck is broader and shorter and settling toward the trochanter.

The mushroom group likewise has 3 components:

4. The epiphyseal zone is thin and squat; the acetabulum fits the head and the neck is broad, with possible opaque areas persisting.

5. Same as no. 4 with slight to considerable irregularity of the outline of the head; excavations are present with flattening to straight line in some portion of the head.

6. Same as no. 5 with sequestra persisting in the epiphyseal region together with greater flattening of the head.

Malum coxae juvenilis is the last group, show ing:

7. All parts of the joint are irregular, and early productive changes are present.

8. Destructive and productive changes are marked.

The final clinical ratings were based on the following criteria (table 2):

a. The child was asymptomatic with no limitation of movement and no shortening.

b. Slight limitation of movement without pain persisted, and there was shortening up to ½ inch.

c. Pain and/or shortening greater than ½ inch and up to 1 inch was present with some limitation of movement.

d. Marked limitation of movement, pain, and shortening over 1 inch were noted.

Summary

Legg-Calvé-Perthes syndrome occurs more frequently in boys than girls in a ratio of 4:1. The onset of the syndrome usually takes place between the ages of 4 and 10 years. There is a direct relationship between the duration of symptoms and the stage of the disease as shown on the initial X-ray examination. Prolonged bed rest with a high-protein diet is recommended. In children under 5 years of age all of the results in a series of 76 cases were good. As the age of onset increases the proportion of bad final results rises. The clinical evaluation, though less accurate, closely parallels the overall X-ray findings (table 2).

I should like to close with this pessimistic quote from Goff: "Every follow-up case of 10 years or more who was 20 years of age or older irrespective of the X-ray appearance of the hip joint had symptoms of hip joint dysfunction. Not one perfect result was obtained."

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The Value of Bentonite for Diarrhea

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In a group of 35 cases of acute diarrhea of diverse etiology, the use of a special preparation of bentonite* provided substantial relief in 34 cases (97 per cent). The causative factors included virus infections, food allergy, spastic colitis, mucous colitis, and food poisoning.

Nature of Bentonite

Bentonite is a native, colloidal, hydrated aluminum silicate. It occurs as a very fine, odorless, pale buff or cream-colored powder, free from grit, and has a slightly earthy taste. Although it is insoluble in water, it swells to approximately 12 times its volume when added to water. Bentonite magma is prepared by adding 50 Gm. of bentonite to a sufficient quantity of purified water to make 1 liter.[1]

Geologically, bentonite is a rock composed of clay minerals formed by the alteration of minute glass particles that once composed volcanic ash. The name was derived from the Fort Benton series of cretaceous rocks in Wyoming, where it was first found.[2]

Bentonite has been used extensively, in the form of a gel, as a bulk laxative and also as a base in many dermatologic formulations.[3] A desirable property of bentonite is its avid adsorption of other substances, both organic and inorganic.[4]

History of Medical Uses

Hydrated aluminum silicate was used for centuries in China for summer diarrheas and cholera.[5] In 1712 Father Deutrecolle, a Jesuit missionary, described the clay works in China and mentioned that the clay was used in treating diarrhea.[6]

The use of hydrated aluminum silicate with other medications during the Balkan war of 1910 reduced the mortality from cholera among the soldiers from 60 to 3 per cent, and it also proved valuable in the 1919 epidemic of cholera in China.[7] In India hydrated aluminum silicate was found useful in the treatment of acute bacterial food poisonings encountered in the British Army.[8]

Hydrated aluminum silicate has been used as an adsorptive in the symptomatic treatment of various forms of enteritis[9] including ulcerative colitis.[10]

Gastrointestinal adsorbents including hydrated aluminum silicate are presently recommended in acute diarrhea and bacillary dysentery to adsorb the toxins which produce the diarrhea.[11] Hydrated aluminum silicate has been used in the treatment of abnormal intestinal fermentation to adsorb gases, toxins and bacteria.[12] In a fluid medium it carries down large numbers of bacteria and adsorbs the toxins of cholera, typhoid, dysentery, and apparently of the putrefactive and proteolytic bacteria.[13]

In vitro studies suggest that the beneficial action of hydrated aluminum silicate in cholera depends on the adsorption of the cholera toxins and inclusion of the bacteria.[6] Later investigations indicate that bentonite adsorbs certain viruses including those of intestinal influenza, as suggested by my successful results in that disease. Bacteriologically bentonite is used for purification of viruses.[14, 15]

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* The bentonite preparation (with distilled water as a vehicle) used in this study was Vit-Ra-Tox "16", supplied by V. E. Irons, Inc., of Boston, Mass.

The specific properties of bentonite have been shown to have an important bearing on its therapeutic uses.[16] A paste made from hydrated aluminum silicate is recommended by Russian radiologists to deactivate hands contaminated by radium salts.[17] In Russia bentonite has been used in the therapy of peptic ulcer.[18]

Since bentonite has such strong adsorptive powers its consumption in excessive amounts over a considerable period of time could render vitamin A and other necessary nutrients unavailable by adsorbing them from the alimentary canal. Independent experiments purposely designed to determine how much this adsorption would adversely affect the growth and health of experimental animals indicated no ill effects when the intake of bentonite did not exceed 25 per cent of the total diet.[19]

PRESENT STUDY

The therapeutic efficacy of bentonite for acute diarrhea of diverse etiology was evaluated in a group of 35 cases. The causative factor was virus infection in 18 cases, food allergy in 8, spastic colitis in 4, mucous colitis in 3, and food poisoning in 2.

The symptoms were diarrhea in 35 cases (watery stools in 29, soft stools in 6), abdominal cramps in 30, anorexia in 18, malaise in 15, headache in 14, nausea in 13, and weakness in 7.

The group included 25 females and 10 males. The average age was 51.8, with a range from 23 to 76 years. The average weight was 153.2 lbs., with a range from 92 to 260 lbs.

A complete physical and routine urinalysis were made in every case to eliminate concomitant diseases which might affect the course of the diarrhea. Where indicated, laboratory and X-ray examinations were performed as part of the diagnostic procedure. Every effort was made to obtain a homogeneous group of patients so as to eliminate variables from the study.

The standard treatment employed was 2 tablespoonfuls of bentonite in distilled water as a vehicle 3 times daily. In cases of food allergy the dosage was increased above 6 tablespoonfuls daily.

THERAPEUTIC RESULTS

Acute diarrhea was relieved by bentonite in 34 of the 35 cases (97 per cent) in an average period of 3.8 days, ranging from 1 to 14 days. Following treatment the number of bowel movements per diem was reduced from an average of 4.0 (range 2 to 6) to an average of 1.8 (range 1 to 3).

In the 18 cases of diarrhea due to virus infection the therapeutic response was unusually prompt. Hence in this group the average duration of treatment was 2.2 days with a range of 1 to 3 days. In the 8 cases due to food allergy the diarrhea persisted longer and on many occasions returned if the same allergenic food was eaten again.

The concomitant symptoms were relieved in the following case percentages: abdominal cramps in 24 of 30 cases (80 per cent), anorexia in 14 of 18 cases (78 per cent), malaise in 12 of 15 cases (80 per cent), headache in 10 of 14 cases (71 per cent), nausea in 11 of 13 cases (85 per cent), and weakness in all of the 7 cases (100 per cent).

No side-effects attributable to the medication were observed in any case. Routine chemical and microscopic examination of the urine was negative in all 35 cases.

SUMMARY

A preparation of bentonite with distilled water as a vehicle was found to be safe and highly effective in the treatment of acute diarrhea. The diarrhea was relieved in an average of 3.8 days in 34 of 35 cases (97 per cent) of diverse etiology. The number of bowel movements per diem was reduced from an average of 4.0 to an average of 1.8. The concomitant symptoms were also effectively relieved in most cases, namely, abdominal cramps (80 per cent), anorexia (78 per cent), malaise (80 per cent), headache (71 per cent), nausea (85 per cent), and weakness (100 per cent).

Fastest results were observed in intestinal influenza, in which the diarrhea was controlled in an average of 2.2 days.

Bentonite is a native, colloidal, hydrated aluminum silicate. A survey of medical literature disclosed that hydrated aluminum silicate was used for centuries in China for summer diarrheas and cholera. Favorable results have been reported in cholera, bacillary dysentery, acute bacterial food poisonings, ulcerative colitis, and various forms of enteritis.

It has been established in vitro and in vivo that hydrated aluminum silicate adsorbs toxins, bacteria and viruses. This property helps to explain its therapeutic usefulness in acute diarrhea of diverse etiology.

By virtue of its physical action bentonite serves as an adsorbent aid in detoxification of the intestinal canal.

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Listeria Meningitis in the Newborn

Report of Two Cases and a Review of the Literature

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IN THE HUMAN INFANT *Listeria monocytogenes* produces 2 major clinical manifestations of disease. A disseminated miliary granulomatosis has been described and is characterized by generalized nodules in the visceral organs, gastrointestinal tract, central nervous system, and skin. This form is attributed to prenatal infection of the fetus with resultant intra-uterine or neonatal death.[1, 2, 3] In the absence of a necropsy the diagnosis of this type is obscure and the true incidence uncertain.

A more localized form of the disease, namely, a purulent meningitis, is accessible to bacteriologic identification and is being reported with increasing frequency in young infants. It has been suggested that some forms of neonatal Listeria meningitis may exist as indolent or obscure infections and may lead to mental retardation.[4]

It appears that most cases of this disease in the human subject have occurred in the infantile or geriatric periods of life.[5, 6] Comprehensive reviews of this subject have been written by Seeliger,[6] Hoeprich[7] and Murray.[1] Currently, there is renewed interest in this form of neonatal meningitis because early recognition and comprehensive treatment with modern antibiotic therapy can achieve a satisfactory recovery.

REPORT OF CASES

Case 1. L. B., a 2-week-old Negro female infant, was admitted on October 6, 1959 with the chief complaint of an elevated temperature of 1 day's duration. The infant was born in this hospital after an uneventful pregnancy and labor, and was the offspring of a primiparous mother of 15 years of age. She was born at term and weighed 3.04 Kg. She and the mother had been discharged 3 days after birth, both in satisfactory condition. Four days prior to readmission the baby became anorexic and vomited on 2 occasions. The day before reëntering the hospital the mother noted that the baby was unusually hot and refused the formula.

Physical examination revealed a fairly well-nourished, slightly lethargic infant in no apparent distress. The temperature was 103.6° F. The color and turgor of the skin were good, muscular tonus fair, and weight 2.9 Kg. The anterior fontanel appeared normal. There were no unusual findings in the heart and lungs. The abdomen was soft, and no abnormal masses were palpable. The femoral pulses were normal, and the neurologic examination was negative. There was no evidence of focal infection of the umbilicus, skin, or mucous membranes. The possibility of a meningeal infection was considered because of fever, lethargy and vomiting. The cerebrospinal fluid was cloudy and under slightly increased pressure. There were 730 leukocytes per cu. mm. (51 per cent polynuclears and 49 per cent lymphocytes). No organisms were seen in the Gram-stained specimen of the sediment. Chemical examination showed the chlorides to be 105 mEq./L and the blood glucose to be 17 mg. per 100 ml.

The hemoglobin was 13.1 Gm. and the hematocrit 37 per cent. The white blood cells numbered 13,300 with

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18 per cent neutrophils, 66 per cent lymphocytes, 8 per cent monocytes, 6 per cent eosinophils, and 2 per cent basophils. The morphology of the cells was normal. The moist preparation was negative for sickling. The sedimentation rate was 37 mm. per hour. The nonprotein nitrogen was 26 mg. per 100 ml. The total serum protein was 6.80 (albumin 4.20 Gm., globulin 2.6 Gm.). Total serum cholesterol was 147 mg. Serum sodium was 135, potassium 4.6, and chlorides 100 mEq./L. Heterophil antibody test and serologic test for syphilis were negative. Blood, nose, throat, urine and stool cultures were negative for pathogenic microörganisms. The urine was normal. Liver function tests (thymol turbidity and cephalin flocculation test) were normal. A roentgenogram of the chest was normal.

Special studies gave the following results:

1. Animal pathogenicity

a. Mouse: Intraperitoneal inoculation of 0.2 ml. of a 24-hour broth culture of the isolated organism caused the death of the white mouse within 18 hours.

b. Rabbit: A cotton swab which was dipped into the same broth culture and then rubbed gently onto the conjunctiva of the everted eyelid of a rabbit produced a purulent conjunctivitis within 36 hours.

2. Serology

a. Agglutination with the infant's and mother's sera 1 month after the onset of the disease against the patient's own Listeria proved to be negative.

b. Serotyping: A broth culture specimen was sent to Professor Seeliger of Bonn, Germany, and the Listeria was identified as type 4b.

3. Epidemiology

Cultures of the mother's nose, throat swab, urine, blood and vaginal discharge were all negative. The household of the patient was thoroughly investigated. There was no exposure to animals and no other known contact with a possible source of infection.

After the establishment of the diagnosis of purulent meningitis the patient was started on antibiotics and supportive therapy. Treatment consisted of chloramphenicol by vein, 150 mg. daily, procaine penicillin G every 6 hours in aqueous suspension, 300,000 units intramuscularly, and sulfisoxazole, 500 mg. orally initially, followed by 250 mg. every 6 hours.

Oral intake was discontinued temporarily, and the patient received by venoclysis 5 per cent glucose in distilled water (130–150 ml. per Kg. daily via saphenous cut down). The patient responded dramatically to treatment. Her temperature became normal on the third hospital day and remained so thereafter. Oral feedings of glucose in water were resumed on the third hospital day, and the regular formula was given 2 days later when the venoclysis was discontinued. On the seventh day chloramphenicol and sulfisoxazole were discontinued and penicillin was reduced to 200,000 units every 8 hours, being discontinued on the fourteenth day. Three additional spinal taps were performed on the seventh, fourteenth and twentieth hospital days, and each showed progressive improvement. In view of the frequent complication of subdural effusion in infantile meningitides,[8] a bilateral subdural tap was done on the thirteenth hospital day, and the findings were negative. The infant had an uneventful hospital course and was discharged on the twenty-first hospital day.

The infant has been seen subsequently in the pediatric outpatient clinic and found to be in excellent health. At the last examination, when she was 5 months of age, she exhibited the following measurements: weight 7,050 Gm., height 62 cm., head circumference 40 cm., chest circumference 39 cm. There was no evidence of central nervous system damage, and the electroencephalogram was negative.

Case 2. P. B. was a 3-week-old Negro female who was readmitted to the hospital on October 12, 1960 because of extreme irritability of 2 days' duration. She had been born in this hospital after an uneventful gestation and delivery and was the offspring of a primiparous mother of 17 years of age. The neonate was a full-term infant and had an uneventful course in the nursery. Following discharge, she had many loose bowel movements which were treated by modification of the formula at home. The grandmother noted that a week prior to admission she began to assume a posture on her side and refused to lie on her back. In the 2-day interim prior to admission she was extremely irritable and screamed loudly when touched or moved. The mother was apparently in good health. She was in close contact with a dog who was a household pet.

Physical examination revealed a well-developed and fairly well-nourished infant who lay on her side quietly but who on being touched or moved screamed loudly. The temperature was 102° F and the weight 2,724 Gm. The anterior fontanel was moderately distended and the back was stiff.

Lumbar puncture revealed a cloudy fluid under increased pressure. The cerebrospinal fluid showed 927 white blood cells per cu. mm. (neutrophils 65, lymphocytes 35), chlorides 120 mEq./L and sugar 9.7 mg. per cent. The sediment showed gram-positive rods arranged in various formations—single, paired, parallel, and tetrad. *Listeria monocytogenes* was cultured from both the blood and the cerebrospinal fluid. The organism was sensitive to Terramycin, Aureomycin, Furadantin, Kantrex, Neomycin, bacitracin and Magnamycin.

After the diagnosis was made the patient was placed on intravenous fluids. In the initial 14 hours following admission she received a total of 4 million units of crystalline aqueous penicillin intravenously and 50 mg. of chloramphenicol. She did well until 12 hours following admission, when she was seen to have a grossly distended abdomen. Nasogastric suction was instituted, and a small amount of bloody material was aspirated. The infant's condition deteriorated rapidly, and she died 15 hours following admission.

Discussion

Epidemiology and Immunity: Listeria monocytogenes was discovered in 1924 by 3 English workers who described an organism that produced a generalized infection in laboratory animals.[9] They named it "bacterium monocytogenes" because of the monocytosis which prevailed in the injected rabbits. Later Pirie[10] of South Africa introduced the name *Listeria monocytogenes*, which has now become universally accepted. It was not realized until 1934 that the organism could cause a severe, fatal meningitis in man.[11] Complete cultural, serologic and animal studies are advisable in order to fully establish the diagnosis.[6, 7]

Listeria monocytogenes is a motile, gram-positive, nonacid-fast, microaerophilic, nonsporulating pathogenic bacillus. It attacks various carbohydrates with the formation of acid but not gas and causes beta hemolysis on agar-containing erythrocytes. Confusion in a bacteriologic diagnosis may arise from its striking morphologic resemblance to diphtheroids the cultural similarity on blood agar to beta streptococci, and the easy decoloration in gram-staining and pleomorphic resemblance to *Hemophilus influenzae*.[7, 11, 12] Listeria are antigenically distinct from other bacteria. Paterson[13] classified *Listeria monocytogenes* into 4 serotypes by means of 5 somatic and 4 flagellar antigens, a fact which was later confirmed by Seeliger.[6] Type 1 occurs more frequently in Europe, whereas type 4 prevails in the U.S.A.[14, 15] Types 2 and 3 are very rare.[6] The recognition of serotypes is important in establishing the identification of *Listeria monocytogenes* and in epidemiologic studies. Characteristic animal pathogenicity is required for identification of Listeria, because in the usual clinical laboratory antisera are not available for diagnosis.[7] Both rabbits and mice should be inoculated. In the rabbit inoculation by gently rubbing the conjunctiva of the everted eyelid with a cotton swab which has been dipped into a 24-hour broth culture of the organism produces a purulent conjunctivitis in 24 to 48 hours. This test was first described by Anton.[16] In the mouse intraperitoneal inoculation of 0.1 to 0.25 ml. of a 24-hour broth culture of Listeria leads to death in 1 to 3 days.[7]

Very recently a rather rapid and specific immunologic method of identification with the fluorescent antibody technic was reported by Smith et al.[17]

Specific details regarding the pathogenesis of this infection are obscure, but there is evidence that direct transfer of infection from mother to her fetus can occur.[6] Recent reports confirm, bacteriologically, previous observations[18] that Listeric infection of the female genital tract, often low-grade and asymptomatic, can be the cause of habitual abortion in the human, and that therapy with large doses of penicillin and sulfonamide can prevent abortion and perinatal infection of the offspring.[19]

Seeliger,[6] the great specialist of the problem, describes a rather complicated epidemiologic picture. Wild animals and wild birds have natural infections that are transmitted to their domestic counterparts. Man may acquire the infection by direct contact with the infected animals or fowl, or from meat, milk, or contaminated soil. The source, the mode of infection, and the portal of entry of the organism in humans are often obscure.[5]

It is a peculiarity of Listeria meningitis that recovery has not been regularly associated with demonstrable humoral antibody.[7] A significant amount of agglutinating antibody could not be demonstrated in many cases.[5, 6, 20, 21] Moreover, in some instances agglutinin was shown to dis-

TABLE 1

Cases of Neonatal Meningitis due to Listeria Monocytogenes

Author	Year	Age/Days and Sex	Date of Onset	Location	Initial Symptoms	Culture Blood	CSF	Treatment	Outcome
Burn[11]	1936	8—F	Feb. 1934	Connecticut	Fever, anorexia, cyanosis, lethargy, diarrhea	+	+	None	Death
Kapsenberg[25]	1941	14—?	?	Netherlands	?	?	+	None	Death
Beute et al[28]	1948	21—F	Nov. 1947	Netherlands	?	?	+	Sulfadiazine, sulfathiazole	Recovery
Van Driest[29]	1948	10—?	Nov. 1947	Netherlands	Fever, no striking symptoms	Listeria isolated source?		Sulfadiazine, penicillin	Recovery with residual hydrocephalus
Sloof[30]	1948	10—?	Apr. 1947	Netherlands	Fever	?	+	Sulfadiazine, penicillin	Recovery
Line and Cherry[20]	1952	11—F	Oct. 1950	Tennessee	Fever, diarrhea, vomiting, cyanosis, tachypnea	?	+	Sulfadiazine, penicillin, streptomycin	Death
Line and Cherry[20]	1952	6—F	Oct. 1950	Tennessee	Fever, cyanosis, irritability	?	+	Sulfadiazine, penicillin, dihydrostreptomycin, chlortetracycline, chloramphenicol	Residual hydrocephalus; died later in infancy
Line and Appleton[31]	1952	5—M Premature	Aug. 1951	Tennessee	Fever, diarrhea, cyanosis, lethargy	+	+	Sulfadiazine, penicillin, streptomycin, chlortetracycline, oxytetracycline, chloramphenicol	Recovery
Portero and Despirito[32]	1954	14—M	Oct. 1953	District of Columbia	Fever, irritability, anorexia	+	+	Sulfadiazine, penicillin, streptomycin, tetracycline	Recovery
Born[33]	1955	3—? Premature	June 1954	Germany	Fever, irritability	+	+	Sulfonamide, penicillin, oxytetracycline	Recovery with residual hydrocephalus
Selinger and Becker[22]	1955	14—F Twin	Nov. 1954	New York	Fever, listlessness	+	+	Sulfadiazine, penicillin, streptomycin, tetracycline	Recovery
Mathieu et al[23]	1956	21—M	Jan. 1955	Rhode Island	Anorexia, cyanosis, vomiting	+	+	Gantrisin, penicillin, streptomycin, tetracycline	Recovery with residual hydrocephalus
Coulombier et al[34]	1956	3—M	Aug. 1954	France	Fever, irritability, vomiting	?	+	Sulfonamide, penicillin, chloramphenicol	Death
Bret et al[35]	1957	6—F	Oct. 1956	France	Fever, anorexia, convulsion	?	+	Streptomycin, chloramphenicol	Recovery
Enjalbert et al[26]	1957	10—F	Oct. 1956	France	Fever, vomiting, convulsion, tense fontanel	?	+	Streptomycin, chloramphenicol	Recovery
Watson[36]	1957	15—M	Sept. 1955	Ontario, Canada	Fever, diarrhea, vomiting, irritability, fontanel full	—	+	?	Recovery
Dedrick[12]	1957	11—M	Dec. 1952	California	?	—	+	Sulfadiazine, penicillin, chloramphenicol	Death
Dedrick[12]	1957	14—F	Nov. 1956	California	Fever, anorexia, diarrhea	—	+	Sulfadiazine, penicillin, streptomycin, chloramphenicol, oxytetracycline	Death
Edmunds et al[37]	1957	10—M	May 1956	England	Cyanosis	?	+	Sulfadiazine, streptomycin, chloramphenicol	Recovery
Charlotte and Powell[38]	1957	11—F	Mar. 1957	Oklahoma	Irritability, convulsions	?	+	Sulfadiazine, penicillin, streptomycin, oxytetracycline, chloramphenicol	Death
Hood[24]	1957	10—F	July 1955	Louisiana	Fever, irritability	?	+	Sulfadiazine, penicillin, streptomycin, chloramphenicol	Recovery
Hood[24]	1957	15—M	June 1956	Louisiana	Fever, vomiting	—	+ Subdural	Sulfadiazine, penicillin, chloramphenicol	Recovery
Hood[24]	1957	15—M	Aug. 1956	Louisiana	Fever, irritability, convulsion	—	+	Sulfadiazine, penicillin, streptomycin, chloramphenicol	Recovery

TABLE 1—*Concluded*

Author	Year	Age/Days and Sex	Date of Onset	Location	Initial Symptoms	Culture Blood	CSF	Treatment	Outcome
Girard and Gavin[39]	1957	6—F Premature	Nov. 1955	Nova Scotia, Canada	Anorexia, lethargy, cyanosis	+	+	Intensive antibiotic therapy	Recovery
Girard and Gavin[39]	1957	14—M	Jan. 1956	Nova Scotia Canada	Fever, cyanosis, convulsions	?	+	Penicillin, tetracycline	Death
Girard and Gavin[39]	1957	14—M	Mar. 1956	Nova Scotia, Canada	Vomiting, convulsions	?	+	Sulfadiazine, penicillin	Death
Josephson et al[40]	1958	7—F	Nov. 1956	Newfoundland, Canada	Fever, anorexia, convulsions	–	+	Sulfadiazine, penicillin, streptomycin, chloramphenicol	Death
Kepler[27]	1958	7—F	?	California	Fever, irritability, anorexia, convulsion	?	+	Gantrisin, streptomycin, chloramphenicol	Death
Kepler[27]	1958	12—M	?	California	Fever, anorexia, listlessness	?	+	Penicillin, streptomycin, chloramphenicol	Death
King[41]	1958	11—M	Sept. 1957	California	Fever, fontanel full	+	+	Penicillin, streptomycin, chloramphenicol, tetracycline	Recovery
Barrow and Pugh[42]	1958	12—M Premature; cesarean section	Mar. 1956	England	Anorexia, vomiting, listlessness, convulsions	?	+	Sulfonamide, streptomycin, oxytetracycline	Recovery
Martineau[44]	1959	13—M	Dec. 1956	Quebec, Canada	Anorexia, vomiting, convulsions	?	+ Postmortem	None	Death
Martineau[44]	1959	22—F	Aug. 1957	Quebec, Canada	Anorexia, cyanosis, vomiting, convulsions	?	+	Sulfadiazine, penicillin, chloramphenicol, Aureomycin	Recovery
Martineau[44]	1959	9—M	May 1958	Quebec, Canada	Fever, convulsions	?	+	Sulfadiazine, penicillin, chloramphenicol	Recovery
Martineau[44]	1959	28—M	May 1958	Quebec, Canada	Enlargement of the head, spasticity	?	+	Sulfadiazine, penicillin, chloramphenicol	Residual hydrocephalus; died later in infancy
Welshimer and Winglewish[21]	1959	9—F	Apr. 1958	Virginia	Fever, irritability, tremor	?	+	Penicillin, chloramphenicol	Death
Welshimer and Winglewish[21]	1959	14—M	Oct. 1958	Virginia	Fever, convulsions	+	+	Gantrisin, penicillin, chloramphenicol	Death
Hagberg et al[45]	1959	14—F Premature	?	Sweden	Fever, listlessness, anorexia	?	+	Penicillin, streptomycin, chloramphenicol, gamma globulin	Recovery with residual hydrocephalus
Kaijser and Malmström-Groth[46]	1960	14—?	?	Sweden	?	Listeria isolated source?		?	Residual hydrocephalus; died later in infancy
Kaijser and Malmström-Groth[46]	1960	7—?	?	Sweden	?	Listeria isolated source?		?	Recovery
Kaijser and Malmström-Groth[46]	1960	28—?	?	Sweden	?	Listeria isolated source?		?	Recovery
Levy and Nassau[47]	1960	6—M	Apr. 1959	Israel	Fever, diarrhea, tense fontanel	?	+	Sulfadiazine, penicillin, chloramphenicol	Recovery
Levy and Nassau[47]	1960	7—F	Apr. 1959	Israel	Fever, motor irritability	?	+	Sulfadiazine, penicillin, chloramphenicol	Recovery
Levy and Nassau[47]	1960	7—M	Apr. 1959	Israel	Fever, apathy, convulsions	?	+	Penicillin, chloramphenicol	Recovery
Nyhan and Fousek[43]	1958	22—F	Jan. 1947	Connecticut	Fever, anorexia, drowsiness, irritability, cough, convulsions	+	+	Penicillin, sulfadiazine, streptomycin	Recovery

appear rather quickly in the early months following recovery.[1] Perhaps successful antibiotic therapy and chemotherapy reduce the number of organisms so rapidly that the amount of antigen produced is inadequate to stimulate a large antibody response.[21] It may also be that mechanically localized infection is immunologically localized as well. Listeria meningitis may, therefore, not be accompanied by the development of a large amount of serum agglutinin.[7] The lack of a strong antibody response in young infants may also be related to the period of "immunologic immaturity" (in terms of gamma globulin synthesis and production) which is characteristic of the first 3 months of life.

Meningitis is the dominant clinical form of listeriosis in the human[1, 6] To date over 40 cases of neonatal meningitis due to Listeria have been reported in the world literature.[11, 12, 20-47] The initial symptoms in many of the cases (table 1) were fever, listlessness, and anorexia. Some of the infants exhibited irritability, vomiting, cyanosis, convulsions, and diarrhea. Nuchal rigidity is uncommon in neonatal meningitis, but a full or tense fontanel is more likely to be present. Occasionally the temperature is subnormal and the infant shows only apathy and poor feeding habits. In these obscure cases the diagnosis is sometimes delayed or missed with disastrous results. In untreated cases the fatality rate may be 70 to 80 per cent.

The recovery rate has been highest in the cases in which multiple chemotherapeutic agents were employed. Sensitivity tests in vitro are of value in the management of the individual case. The Listeria microörganisms have been reported to be most consistently sensitive to erythromycin, streptomycin, tetracyclines, penicillin, and chloramphenicol.[48] When early diagnosis is combined with prompt and vigorous antibiotic therapy, the mortality can be significantly reduced.[6] Hydrocephalus is probably the most common residual complication observed in infants who survive.

Summary

Two cases of neonatal Listeria meningitis have been reported along with a review of the literature. Epidemiologic, immunologic and diagnostic aspects of the disease have been discussed. This condition apparently occurs more frequently than was formerly thought to be the case. Early recognition and diagnosis together with prompt and intensive antibiotic therapy offer the best chance for a satisfactory recovery.

Acknowledgments: Mrs. Clothilde D. Smith, clinical bacteriologist, gave technical assistance. Dr. Charles W. Buggs, Department of Microbiology, Howard University College of Medicine, provided technical advice. Professor H. P. R. Seeliger, Hygiene Institute, University of Bonn, Germany, performed the serotyping in case 1.

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(Continued on page 373)

Primary Amyloidosis of the Heart: Hemodynamic, Clinical and Postmortem Observations*

Report of a Case

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CHRONIC HEART DISEASE and intractable heart failure of obscure etiology are an ever-present problem for the cardiologist. Primary amyloidosis of the heart is encountered occasionally in cases of intractable heart failure of obscure etiology. In most of the reported cases of amyloidosis of the heart the diagnosis is made post mortem. With the development of clearer concepts of the characteristic hemodynamic changes in cardiac amyloidosis[1, 2, 3] and the establishment of pericardial and myocardial biopsy under local anesthesia as a safe diagnostic tool[4] we should soon find confirmed diagnoses of amyloid heart disease in the living patient, even during early stages of this disease.

The case of primary amyloidosis to be reported here is that of a 47-year-old woman who was in intractable heart failure during the last 2 years of life. Right-heart catheterization studies were done during this period of intractable failure. The first was done in 1953 as a diagnostic study in search of congenital malformation or atypical mitral stenosis. One year later (1954), because of the predominant signs of right heart failure, the second study was done to obtain more conclusive evidence with reference to the possibility of constrictive pericarditis. The data obtained were inconclusive, and surgical exploration was not done. The third catheterization was done in 1955 as the control study in our investigations on the therapeutic effect of pericardial poudrage under local anesthesia in patients with intractable heart failure of unknown etiology.

The serial hemodynamic changes over this 2-year period and the evolutionary changes in right atrial and right ventricular pressure curves will be presented, as well as the clinical and postmortem findings.

REPORT OF CASE

The patient was a 47-year-old Negro housewife, para I, gravida III, who was first admitted to Freedmen's Hospital in August, 1950 with the chief complaint of

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* This study was supported in part by a grant-in-aid from the National Heart Institute, National Institutes of Health, Public Health Service, Department of Health, Education, and Welfare.

moderate shortness of breath, pedal edema, and a swollen, slightly tender abdomen.

Physical examination showed the patient to be a frail, poorly nourished woman who was dyspneic and apprehensive. Her blood pressure was 110/70 mm. Hg, the heart rate 110 per minute with regular rhythm, the respiratory rate 20 per minute, and the temperature 98° F. The heart was moderately enlarged and showed a gallop rhythm and an accentuated P_2 but was free of murmurs and friction rubs. The lungs showed rales at the bases. The diagnosis was congestive heart failure of undertermined etiology. The patient regained cardiac compensation on Digoxin, diuretics and a low salt diet. She was discharged on the eighth hospital day.

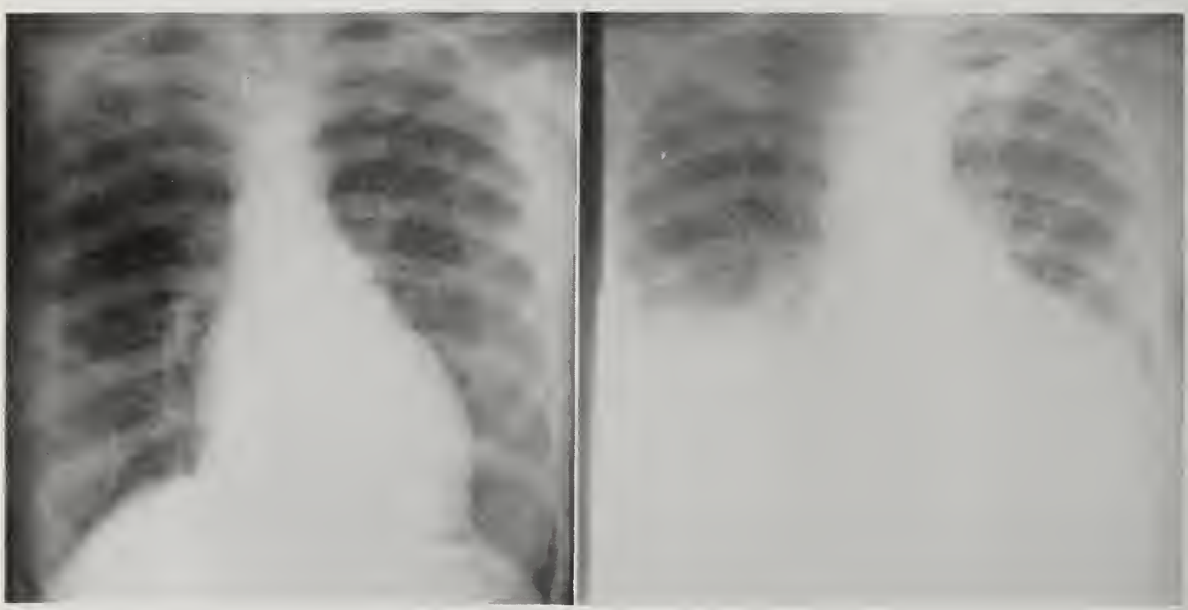

FIG. 1. Left—film made August 30, 1950; right—film made October 11, 1953.

The history indicated some obscure disability in childhood consisting of easy fatigue and moderate shortness of breath, which limited her physical activity. This continued unchanged until the age of 44, when she had paroxysms of palpitation and some wheezing at night which was said to have been due to bronchial asthma.

The history was negative for rheumatic fever, precordial pain, hypertension, diabetes and tuberculosis. At the age of 37 she had antiluetic therapy, and at the age of 46 she had an ovarian cyst removal for menorrhagia.

The family history is of interest. The father died of "heart disease" at the age of 47; a sister died of carcinoma of cervix at the age of 42; another sister died of pulmonary tuberculosis; the mother, living, was afflicted with bronchial asthma.

The second hospital admission was 2 years later (1952) because of excessive vaginal bleeding. Adenocarcinoma of the cervix was discovered on curettage and treated with X-rays and radium implantation. The 1952 record shows no mention of cardiac symptoms. The subsequent course was apparently uneventful until 1953, when she was admitted in congestive heart failure for the second time. An X-ray film of the chest showed marked cardiomegaly and bilateral pleural effusion. The abdomen was distended with ascitic fluid. Figure 1 shows the X-ray films on the 1950 and the 1953 admissions. The standard laboratory data for this and subsequent hospital admissions are shown in table 1.

The patient's response to therapy for congestive heart failure during 6 months' hospitalization was poor. The initial right-heart catheterization was done toward the end of this admission.

The hemodynamic data for this and the 2 subsequent catheterizations are presented in table 2. Specimens of pressure curves obtained on these 3 occasions are presented for comparison (figure 2). Comments on these data will follow (*vide infra*). Suffice it to say that the data of the first 2 studies were strongly suggestive of constrictive pericarditis but not sufficiently so to recommend exploratory thoracotomy under general anesthesia in the presence of massive cardiomegaly and congestive heart failure.

On the third admission in March, 1954 the clinical picture was similar to the preceding. Pleural and ascitic fluids on this occasion presented a transudate, which

TABLE 1

Laboratory Findings

Date	V.P.*	C.T.†	W.B.C.	Hb.	Hct.	NPN	Protein (Gm.%)	A/G Ratio	CO_2 (Vol.%)	Cl (mEq./l)
8-28-50	180	25	11,350	16	53	30				
2-18-52			6,250	11.6	41					
6-24-52			6,100	10.7	44					
5-7-53	224	24	11,450	9.0	37	35	6.59	1.16	54	99
11-28-54	238	32	7,656	14.3	44	61	5.77	1.10		100
2-3-55			4,250	14.7	44	50	5.9	1.14		104
6-16-55			18,750	13.2	50	52	4.6		37	88

Urinalysis: Not remarkable except slight albuminuria
Serological test for syphilis: negative

* Venous pressure—mm. H_2O.
† C.T. Arm-to-tongue circulation time in seconds.

was negative for tumor cells. Intractable, moderately severe heart failure persisted.

Increased myocardial blood supply and improved cardiac function following foreign body-irritant cardiopericardiopexy[5, 6] had been reported. This patient's condition suggested that she might improve after pericardial poudrage, and such was performed under local anesthesia in February, 1955. During this procedure the pericardial sac was found to contain about 150 c.c. of straw-colored fluid, but there was no evidence of pericardial constriction. The heart was massively enlarged and pale reddish brown. The patient showed no ill

TABLE 2

Right-heart Catheterization—Hemodynamic Data

	Normal	10-12-53		10-18-54		1-17-55 Rest
		Rest	Exercise	Rest	Exercise	
Cardiac output, L/min./M^2	3.2 ± 0.4	1.62		1.46		1.77
O_2 consumption, c.c./min./M^2	120-180	112.0	172.2	95.7	226	117.8
Blood O_2 saturation, %						
Arterial	96	91		82		85
Mixed venous	74	47		47		47
Pressure in mm. Hg.						
Systemic	120/75	100/52		88/60		104/56
Pulmonary artery	25/10	42/20	57/28	34/13		49/19
Right ventricle						
Systolic/diastolic	25/0-6	43/16	60/19	34/9	58/24	43/15
End diastolic/systolic × 100	24%	37%	32%	26%	41%	35%
Right atrium	0-6	18		9		14
Pulmonary capillary	8-10	13				
Vascular resistance, dynes-sec.-$cm.^{-5}$						
Pulmonary artery	100-256	1354		767		1196
Systemic	539-1150	2839		2825		2297
Ventricular work against pressure, Kg. M/min./M^2						
Right	0.4-1.21	0.246		0.209		0.620
Left	1.367	1.136		1.362		1.756

effects from the procedure. She was discharged without significant improvement.

She was readmitted for the last time, again in severe congestive heart failure, having shown no apparent benefit from the poudrage. The course was downhill and the patient died on June 19, 1955, 4 months after the poudrage was performed.

Necropsy was performed approximately 18 hours after death. The body was that of a moderately well-developed but emaciated adult female measuring 150 cm. and weighing approximately 43 Kg. The nail beds were cyanotic, and the chest wall was edematous. There were remote surgical scars on the left side of the precordium and mid-abdomen. Decubiti were present in the sacral area. The abdomen was distended. Bloody fluid exuded from the vaginal canal.

The peritoneal, the right pleural, and the left pleural cavities contained, respectively, 3,000 ml., 1,500 ml., and 700 ml., of clear yellow fluid. Bilateral pleural adhesions were present primarily in the apical areas. The pericardial space was completely obliterated by fibrinous and fibrous adhesions. The heart was enlarged and weighed 525 Gm. The coronary arteries were normal in distribution, patent and minimally atherosclerotic. A mural thrombus was present in the right auricular appendage. The heart valves were unaltered grossly. The septa were intact. There were no stigmata of congenital heart disease. The ventricular myocardium averaged 1.5 cm. in thickness on the left and 0.3 cm. in thickness on the right. The myocardium throughout was unusually firm and pale. Occasional atheromatous plaques were noted in the aorta.

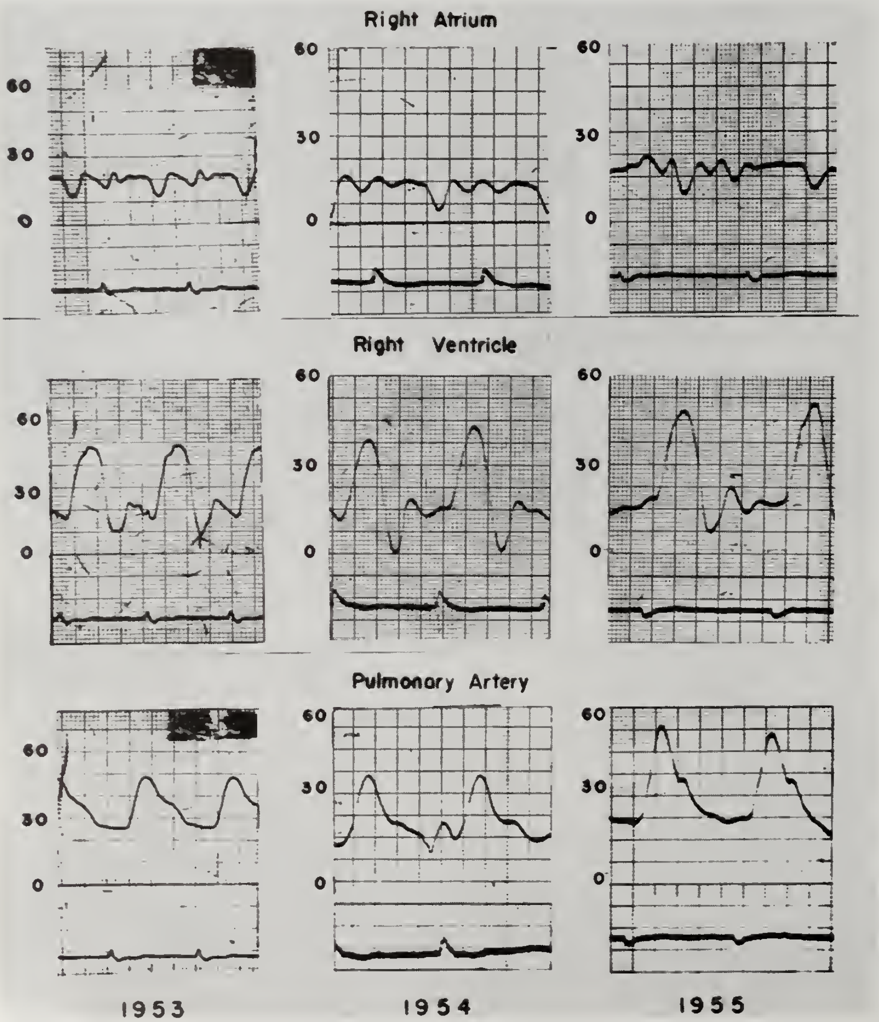

FIG. 2. Serial right-heart pressure curves.

Both lungs were edematous and congested. The right lower lobe was atelectatic. The remainder of the examination was not remarkable.

Histologic sections of the auricular and ventricular myocardium demonstrated diffuse interstitial deposits of metachromatic hyaline material (figure 3). This material was distributed about the walls of blood vessels and around muscle fibers, individually and in groups. The intercellular hyaline-like material was metachromatically characteristic of amyloid when stained with crystal violet. The quantity of intercellular amyloid deposition varied considerably. In areas where the deposition was heavy the muscle fibers were atrophic, apparently compressed by the amyloid, and in other areas complete replacement of muscle fibers had occurred. Often in association with the pericellular amyloid deposits there were pericapillary deposits. Occasionally the amyloid was clumped in nodular masses.

In the subendocardial stroma there were broad bands of amyloid replacing the collagenized fibrous connective tissue. The epicardial adipose tissue showed prominent amyloid deposits surrounding individual fat cells. On the epicardial surface there was a diffuse foreign body granulomatous inflammatory cellular reaction with many of the giant cells containing birefringent crystalline material (talcum powder).

The liver showed patchy thin deposits of amyloid matrix between the sinusoidal walls and the plate cells with compression atrophy of the latter. It was focally infiltrated by lymphocytes and polymorphonuclear leukocytes, particularly in the portal areas.

There were focal amyloid deposits in other organs, including the arteries and veins of the lungs and the gastrointestinal tract, the pulmonary alveolar walls, and the sinusoidal walls of the splenic pulp.

Focal and often nodular amyloid deposits were seen between muscle cells in the muscular layer of the esophagus, stomach and intestine. The adrenal glands, the kidneys, the urinary bladder, the uterus, and the ovaries were free of amyloid material. There was no residual malignancy in the uterus.

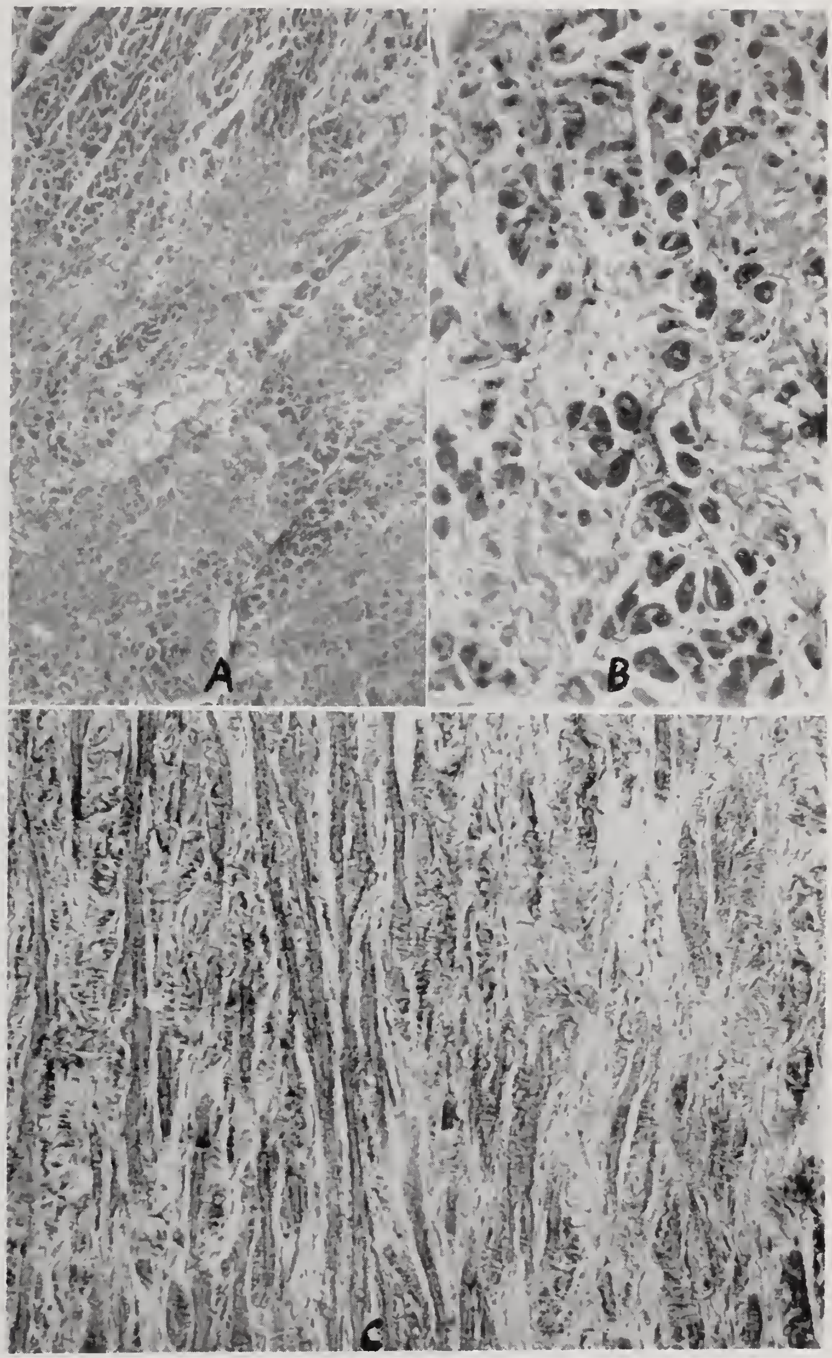

FIG. 3. Myocardium—diffuse amyloid deposition with atrophy and muscle fiber replacement. H & E stain: A (low-power), B and C (high power).

DISCUSSION

Amyloidosis of the heart appears to be not uncommon as a histopathologic autopsy finding. The autopsy incidence of primary amyloidosis of the heart in adults aged 50 years and over dying of all causes has been reported as 15.2 per thousand.[7] An isolated study in Western Tennessee in adults of similar ages showed an unusually high incidence of 34.7 per thousand.[8] There are a few cases reported in the literature in the age group 30 through 39.[9, 10]

Reimann and his associates[11] classified amyloidosis as secondary, primary, para, and tumor-forming amyloidosis. Secondary amyloidosis was so designated because of its invariable association with preëxisting disease, such as tuberculosis or chronic suppuration. In this type the deposition of amyloid is most marked in the liver, spleen, kidney and adrenals, although it may occur in other sites including the heart. However, cardiac insufficiency seldom seems etiologically related to this secondary amyloidosis.

Para amyloidosis is seen in association with multiple myeloma. From 6 to 10 per cent of such patients are said to develop amyloidosis.[12]

The other forms of amyloidosis are not regularly associated with any other diseases, have unknown etiology, and are characterized as primary. Primary systemic amyloidosis shows major deposition in the tongue, gastrointestinal tract, heart, lung, smooth and striated muscle, skin, and lymph nodes. Another form of primary amyloidosis, different from the first, tends to have its major deposition limited to a single organ, for example, primary amyloidosis of the heart.

Apparently the least common type of amyloidosis is tumor-forming amyloidosis which occurs as localized tumefactions in the skin and mucous membranes, sometimes simulating neoplastic growths. Any of these forms which are not clearly of the secondary type may result in cardiac involvement. There is some difference of opinion with reference to frequency of cardiac insufficiency in patients with primary amyloidosis of the heart. Some authors indicate an incidence less than 30 per cent[7, 13] other authors indicate incidence of 50 per cent or more.[14, 15] The symptoms in patients with cardiac insufficiency due to cardiac amyloidosis are in no way distinctive, but when heart failure occurs it tends to be intractable.

The electrocardiogram characteristically has shown nonspecific changes consisting of low voltage and slurring of the QRS complexes in the limb leads and nonspecific T-wave changes.[16]

The right-ventricular pressure curve in patients later shown to have amyloidosis of the heart closely simulates the characteristic pressure curve of constrictive pericarditis. The distinctive features of these pressure curves are thought to be due to drastic curtailment in the ability of the right ventricle to undergo distention during diastole. This fixation in ventricular diastolic size causes a greatly increased end-diastolic pressure, without proportional increase in systolic pressure, resulting in an end-diastolic to systolic pressure ratio which exceeds 1:3.

Thus, the end-diastolic right-ventricular pressure in primary amyloidosis of the heart, as in constrictive pericarditis, is commonly seen to be greater than 33 per cent of the ventricular systolic pressure.[1, 2, 3]

It should be noted that this pressure-curve pattern has been reported in other cardiac disorders including myocardial fibrosis, idiopathic myocarditis, and pericardial effusion[17, 18, 19]

The limitation in diastolic ventricular distensibility results in a second characteristic alteration of the ventricular pressure curve. In the normal right ventricle the first one-tenth second following isometric relaxation is the important period of rapid diastolic inflow and at the same time the period of maximum diastolic distention. These characteristics prevent any sudden ventricular diastolic pressure rise. In constrictive pericarditis, on the other hand, rapid inflow occurs but the concomitant rapid ventricular distention fails to come off, resulting in a steep ascent in the early phase of the ventricular diastolic pressure curve. Thus, the diastolic pressure curve of the right ventricle gives the impression of an early diastolic dip with a high plateau terminating at the end of the diastole.

The pressure curve of the right atrium in constrictive pericarditis and in amyloidosis of the heart is altered such that the mean pressure is elevated and the pressure curve changes described an "M" or "W" contour during the cardiac cycle. The right atrial and ventricular pressure curves in the case of cardiac amyloidosis presented conform with those reported by other investigators.[2,3] A comparison of serial ventricular pressure curves of 1953, 1954 and 1955 shows no progressive changes. It appears, however, that the gradient between the end-diastolic pressure and the nadir of the diastolic pressure curve in early diastole tends to vary inversely with the height of the end-diastolic pressure.

The hemodynamic data of the 3 catheterizations are listed in table 2. In each instance there is persistent low cardiac output, moderate to severe arterial oxygen unsaturation and elevated pressures in all portions of the lesser circulation but with a slight rise in the pulmonary wedge pressure. The right atrial pressure was correspondingly greatly elevated and was similar to the end-diastolic ventricular pressure. The end-diastolic right ventricular pressure was less than 33 per cent of the systolic pressure at rest in the 1954 study but exceeded this figure in the 1953 and 1955 studies. With exercise the diastolic to systolic percentage dropped from 37 to 32 in 1953, but in 1954, when the resting end-diastolic pressure was only 26 per cent of the systolic, it rose to 41 per cent with exercise. The vascular resistances were regularly elevated in each of the studies.

This patient represented a clinical experience not uncommon for the cardiologist, in which, after reasonably exhaustive standard diagnostic and therapeutic procedures, including the Congo red test and a skin biopsy, the patient still retained the clinical diagnosis of intractable heart failure, etiology undetermined.

The antemortem diagnosis might have been established in this patient if the myocardial biopsy had been done at the time of poudrage.

The utilization of hemodynamic studies and newer methods of myocardial biopsy procedures make the antemortem confirmation of primary cardiac amyloidosis practicable in clinical diagnosis. We are keenly aware of the limitation of medical aid for these patients, but our knowledge of the etiology, prevention and definitive therapy are no further advanced than at the end of the 19th century.

SUMMARY

A case of primary cardiac amyloidosis with intractable heart failure has been presented in which serial hemodynamic studies and necropsy findings have been reported. The clinical course and necropsy findings are similar to the picture of this disorder presented by previous investigators. The hemodynamic changes are comparable to the few previously reported studies of cardiac amyloidosis.

Now that myocardial biopsy in the severe cardiac is feasible, this procedure along with the characteristic hemodynamic and clinical course should permit more frequent antemortem diagnoses.

Our knowledge of etiology, prevention, and definitive therapy in primary cardiac amyloidosis continues to be negligible.

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(*Continued on page 373*)

Macroglobulinemia and Amyloid Nephrosis

Report of a Case

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Amyloidosis of the kidney is an unusual lesion frequently associated with the nephrotic syndrome.[1] In secondary amyloidosis the kidney is commonly involved, and the clinical manifestations are dependent upon the degree and amount of amyloid deposition in the kidney.[2,3] Primary amyloidosis of the kidney is more common than the secondary amyloid variety.[4,5]

The literature contains a few references to amyloid nephrosis[1,6,7] but none that we can find pertaining to the association of macroglobulinemia and amyloid nephrosis. This association deserves investigation, since macroglobulinemia is often a variant of lymphoma or multiple myeloma. The amyloidosis in the patient to be reported is regarded as idiopathic only in so far as a primary cause has not been established.

Report of Case

This was the first District of Columbia General Hospital admission of a 72-year-old white woman. About 4 or 5 months before entry she noticed the insidious onset of ankle edema associated with pruritus. She had been treated with chlorothiazide, 0.5 Gm. per day, without any noticeable improvement. When she was first seen hepatosplenomegaly, 4-plus proteinuria, and double refractile bodies in her urine were present. There was no past history of renal disease. She had been treated for syphilis in 1939. At the time of admission her temperature was 98.6° F, her pulse rate 84, and her blood pressure 105/55. She was coöperative, agile, and alert. Her skin was sallow. There was enlargement of both her liver and spleen and marked anasarca. No other abnormal physical findings were noted.

The hematocrit was 38, and the white blood cells numbered 13,400, with 17 per cent eosinophiles. The total eosinophile count was 3,825. The sedimentation rate was 46. The urine had a specific gravity of 1.004 and 4-plus protein, and doubly refractile lipid bodies were present; the proteinuria was 8.7 Gm. per 24 hours. Several tests for Bence-Jones protein were negative. The blood urea nitrogen was 8 mg. per 100 ml., the fasting blood sugar was 88 mg. per 100 ml., the alkaline phosphatase was 4.4 Bodansky units, the bromsulfalein test showed 1 per cent retention in 45 minutes, the blood cholesterol was 434 mg. per 100 ml., and the total protein was 4.9 Gm., with albumin 2.1 Gm. and globulin 2.8 Gm. The serum sodium was 140 mEq./l, the chlorides 103 mEq./l, the potassium 4.2 mEq./l, and the bicarbonate HCO_3 28 mEq./l. Repeated L.E. preparations were negative, and the VDRL tests were negative. A chest X-ray film showed slight cardiomegaly. A bone survey, an intravenous pyelogram, and a venacavagram were normal. An electrocardiogram showed QT prolongation and precordial T-wave inversion.

A liver biopsy revealed slight fatty metamorphosis.

Two bone-marrow aspirations showed 5 to 10 per cent plasmacytoid lymphocytes and 20 per cent eosinophiles. Cells characteristic of multiple myeloma were not present.* Two renal biopsies were characteristic of diffuse amyloid deposition with hyaline droplet degeneration of the tubules. Serum protein studies† revealed the presence of macroglobulins (table 1).

TABLE 1

Serum Electrophoresis

	Total Protein	Albumin	$Alpha_1$	$Alpha_2$	Beta	Gamma
Normal mean (Gm. %).....	7.1	4.2	0.3	0.7	0.8	1.2
One S.D.......	0.6	0.3	0.1	0.1	0.1	0.2
Subject (Gm. %).....	5.1	1.3 (25%)	0.3 (6%)	1.3 (25%)	0.7 (13%)	1.6 (31%)

Ultracentrifugation: 10.9 per cent macroglobulins of approximately 18S $S_w20°$.

On a regimen of low sodium diet and the occasional use of mercurial diuretics the edema disappeared. The patient became asymptomatic and was discharged to her local physician in good spirits and good physical condition.

Discussion

Amyloid is an extracellular hyaline substance staining metachromatically. Systemic deposition occurs in gradations, first around capillary walls, then around arteries and on the surface of cells, and lastly on collagen fibers.

In primary amyloidosis the substance may be found in any organ or tissue, but deposition is most frequent in the heart, blood vessels, and other mesodermal tissues. The symptoms can be correlated with the amount of amyloid in the particular organs and tissues involved. The diagnosis is made by biopsy and special stains.

Our patient had a positive renal biopsy for amyloid. She developed a nephrotic syndrome which is known to occur more commonly in primary amyloidosis. Hypertension and renal failure, notable features of secondary amyloidosis in the presence of renal involvement, were not present.

According to Osserman,[8] the presence of plasmacytoid lymphocytes in the bone marrow is almost a constant finding in primary amyloidosis. Our patient was definitely noted to have such cells in her bone marrow.

Hyperglobulinemia is seen more regularly in the primary than in the secondary type of amyloidosis. Snapper[9] remarked that in those cases of myelomatosis in which amyloidosis and proteinuria develop hyperglobulinemia is absent.

There are qualitative differences in the globulin fractions of hyperglobulinemic cases of amyloidosis. Gamma globulins are generally elevated but may be normal. $Alpha_2$ and beta globulins are increased.

Macroglobulinemia demonstrated by ultracentrifuge analysis characteristically has a sedimentation constant of 15S or more.[10, 11] The serum of our patient showed a sedimentation constant of 18S, this fraction making up 10.9 per cent of the globulins.

One method of distinguishing between multiple myeloma and Waldenström's macroglobulinemia is the bone-marrow examination.[12] A considerable number of altered plasma cells are predominant in the marrow of patients with myeloma, while in Waldenström's disease the plasmacytoid lymphocyte is the cardinal feature. This particular cell often is PAS positive.[13] Another method is based upon the fact that the carbohydrate content of macroglobulins in Waldenström's disease is higher than in multiple myeloma.[14, 15] It is worthy of note that the macroglobulins in Waldenström's disease may well be fluctuant in the course of the disease, that is, increased or decreased.[13]

Finally, as to therapy in Waldenström's macroglobulinemia, heparin has been reported to bring about a transient improvement ascribed to a precipitable globulin.[16] Penicillamine has been used in a few instances, and definite conclusions cannot be drawn therefrom.

(*Continued on page 373*)

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* We are indebted to Dr. Robert Lukes of the Armed Forces Institute of Pathology for reviewing the bone marrow and performing an ultracentrifugation study.

† We are indebted to Dr. Paul Schwab of the National Institutes of Health for the plasma electrophoresis and ultracentrifugation with quantitation of macroglobulins.

Primary Carcinoma of the Fallopian Tube*†

Report of a Case

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Few gynecologic problems are as rare or as difficult to diagnose preoperatively as primary carcinoma of the fallopian tube. Indeed, its rarity can be clearly attested to by the fact that only 1 case has been reported at Doctors Hospital from over 200,000 general admissions, or 20,500 gynecologic admissions in the past 20 years.

The difficulties encountered in making a preoperative diagnosis of primary carcinoma of the fallopian tube are expressed best by McGoldrick,[1] who reported only 1 of 376 cases recorded in the literature correctly diagnosed from the clinical findings only. In 1942 Hobbs[2] reported a case diagnosed as a "probable" carcinoma of the fallopian tube on the basis of a symptom-complex known as hemohydrops tubae profluens.

Yet, almost because of these difficulties, the seriousness of this pathologic entity is such as to warrant continued investigation. With this in mind, the 1 case from Doctors Hospital will be presented, along with a brief discussion relating its pertinent points with those previously described in the literature.

Report of Case

E. E. K., a 53-year-old single, nulliparous white woman, was admitted to Doctors Hospital on April 7, 1960, with the chief complaint of a profuse watery discharge from the vagina of 1 month's duration. Initially, the discharge had been relatively clear though profuse but had become increasingly bloody over the previous 2 weeks. Somewhat concomitantly with the vaginal discharge over the past month she had noted intermittent episodes of lower abdominal crampy pain. The menopause had begun in 1957, with no vaginal bleeding over the interim until the present illness. Other than symptoms of a moderate bladder irritation the remaining system review was essentially noncontributory.

The family history was interesting, in that there was a preponderance of hypertensive cardiovascular diseases. Four sisters and 2 brothers all were considered hypertensive, 1 at the age of 53. The mother died at 52 due to a cerebral vascular accident.

The past history was essentially uninformative, except that she herself had been periodically followed for hypertension. In 1952, following a period of irregular menstruation, a routine uterine curettage was performed, the specimen from which, however, revealed no abnormalities.

Physical examination on admission revealed the patient to be a moderately obese white woman in no apparent distress. The blood pressure was 180/106 mm. Hg. Positive physical findings were limited to the pelvic region, which on examination revealed a large lobulated uterus, whose cervix was edematous, partially ulcerated, and bled readily with contact.

On April 8, 1960 a biopsy of the cervix and a uterine curettage were performed. Histologic examination of the uterine curettings showed fragments of endometrial and myometrial tissue that were both involved by an active, malignant growth, somewhat atypical but most characteristic of a papillary adenocarcinoma. Examination of the cervical tissue showed similar evidence of tumor infiltration.

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† Courtesy of Dr. Gerard F. MacDonald, Yater Clinic, Washington, D. C.

With a diagnosis of adenocarcinoma of the uterine body considered the most likely possibility from these specimens, the patient was again taken to the operating room on April 11, 1960, where a total hysterectomy, partial vaginectomy and bilateral salpingo-oöphorectomy were performed. At surgery, it was noted that both tubes and ovaries were markedly enlarged, cystic, and adherent to the posterior wall of the uterus and adjacent viscera. There was no evidence of peri-aortic or pelvic lymph-node involvement. Examination of the remaining portion of the abdominal cavity was negative.

Postoperatively the patient made an uneventful convalescence, and she was discharged on May 28, 1960, with a follow-up course of X-ray therapy planned for the near future.

Pathological examination showed that the uterus measured 11 by 7 by 3 cm. The cervix showed considerable erosion in the region of the external os. On section there was noted an area of necrosis in the body of the uterus measuring 3 cm. in length. Both ovaries and fallopian tubes were adherent. Both measured 6½ by 15 cm. Both fallopian tubes measured 7 cm. in length, 15 mm. in diameter. On section, they were seen to be filled with yellowish, creamy material.

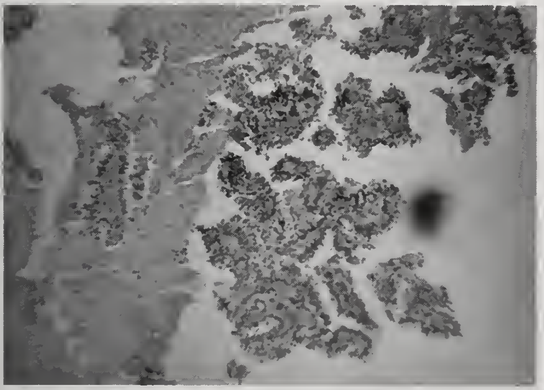

FIG. 1. Cross section of carcinoma of fallopian tube, showing a point in lining mucosal fold from which malignant growth originated.

Histopathologic section taken through the left fallopian tube revealed the lumen to be dilated and filled with an actively proliferating malignant growth which could be seen originating from the lining mucosal fold (figure 1). The growth consisted in general of thick papillary processes with secondary acinar formation lined with pleomorphic epithelial cells in which there were many atypical mitotic figures (figure 2). Sections from the right fallopian tube showed the lumen to be widely dilated, with compression atrophy of the folds and lining mucosa. In the sections from both ovaries extensive areas of metastasis were noted with definite evidence of vascular and lymphatic involvement. Sections through the cervix revealed the mucosa to be intact, and throughout the full thickness of adjacent stroma there were innumerable areas of vascular and tumor extensions. In the remaining endometrium there were numerous areas of secondary tumor involvement, all showing characteristics which were consistent with the primary papillary adenocarcinoma in the left fallopian tube (figure 3).

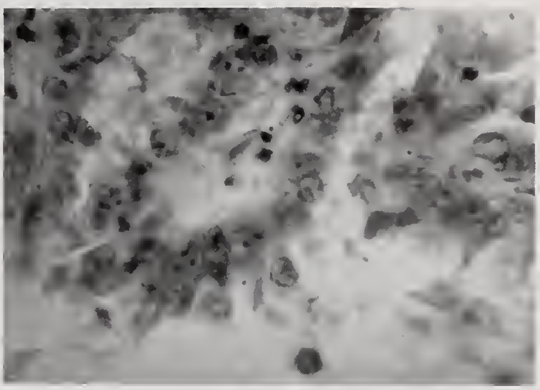

FIG. 2. High-power cross section of carcinoma of fal lopian tube, demonstrating thick papillary processes lined with pleomorphic epithelial cells.

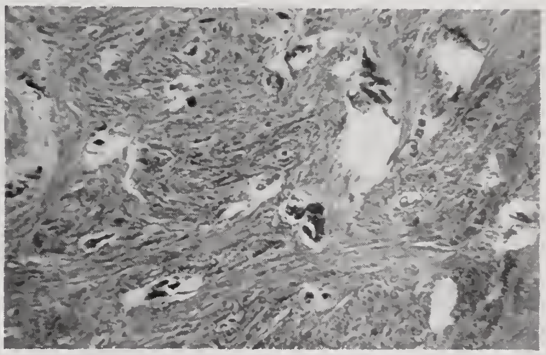

FIG. 3. Low-power cross section of uterine wall containing many metastatic implants of tumor.

DISCUSSION

The extremely low incidence of primary carcinoma of the fallopian tube found at Doctors Hospital is not unusual as can be seen by comparing it to the incidence ratios of several large institutions (table 1). Lofgren[8] estimated that 1 of every 625 malignant growths of the female

TABLE 1

Incidence of Carcinoma of the Fallopian Tube to Gynecologic Admissions in Several Reporting Institutions

Author	Reporting Institutions	No. of Years	Gynecologic Admissions	No. of Cases
Fullerton[3]	Cleveland Clinic	13	22,330	4
Ayre[4]	Royal Victoria Hospital		30,000	2
Novak and Novak[5]	Johns Hopkins Hospital	50	—	20
Bancroft[6]	Middlesex Hospital	25	—	4
Mitchell[7]	University of Pennsylvania	47	—	1
Kamnuankija	Doctors Hospital	20	20,500	1

genital tract is a fallopian tube carcinoma (table 2).

TABLE 2

Incidence of Carcinoma of the Fallopian Tube to Carcinoma Occurring Elsewhere in the Female Genital Tract

Author	Reporting Institution	No. of Years	Primary Malignant Lesions, Gynecologic Tract	No. of Cases
Haupt[9]	Bonn		1,361	3 (0.22%)
Lofgren[8]	Mayo Clinic	40	10,000	16 (0.16%)
Hu, Taymor and Hortig[10]	Free Hospital	45	3,878	12 (0.31%)

Although detailed clinical information regarding this entity can be found in several standard texts, it seems pertinent to review some of the more important signs and symptoms referable to the case presented. As described, one of the most early and constant symptoms is abdominal pain, followed by a vaginal discharge, which is usually profuse and watery or bloody. Occasionally the first symptom is abdominal enlargement, although this was not noted in our case. The pains due to increasing tension with the tube may be sharp or dull, mild, or as severe as that seen in a ruptured tubal pregnancy. The association of diminishing pain following excessive vaginal discharge is called hemohydrops tubae profluens, and is considered one of the most important diagnostic signs available.

No age is exempted, although the majority of the patients are in middle age (between 40 and 65 years). Several cases have been reported in the second decade and some as late as 80 years. Although the greater number of patients are postmenopausal, certainly the child-bearing age is no exception.

There is no definite relation between carcinoma of the fallopian tube with gravidity and parity, but certain authors believe that sterility is commonly associated with it. How many sterile patients develop carcinoma of the fallopian tube, however, is open to question.

In this case the patient is middle-aged and postmenopausal, and revealed the characteristic symptoms of watery discharge and abdominal pain. Despite these, however, a preoperative diagnosis could hardly be entertained in the face of a preliminary biopsy implicating the uterus as the primary site of the carcinoma.

A preoperative diagnosis can almost never be made. In reviewing the literature[1, 2] we learned that the preoperative diagnosis was made on only very few occasions. In the majority of the cases the possibility of the diagnosis was made because of secondary diseases of the pelvic organs.

A positive vaginal smear for carcinomatous cells is not a definite criterion, since carcinoma of the cervix, uterus, and even of the vagina are more common than that of the fallopian tube.[11] In the absence of these conditions (confirmed by other tests, e.g., dilation and curettage, biopsy) particular attention should be given to the diagnosis of carcinoma of the fallopian tube.

If the aspirated fluid is hemorrhagic, noncolloid and mixed with tissue débris and shows polyhedric fatty-degeneration cells, one should think of the possible presence of a malignant

(*Continued on page 374*)

PROCEEDINGS OF THE GEORGETOWN UNIVERSITY MEDICAL CENTER TUMOR BOARD

A CASE OF OVARIAN CARCINOMA

Edited by

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This 39-year-old colored woman was admitted to the Georgetown University Hospital for the sixth time with a 2-week history of painless swelling of the left ankle and intermittent right lower quadrant pain. Her past history revealed that 5 years prior to this admission a left adnexal cyst had been detected. A dilation and curettage was performed. This operation was complicated by a postoperative pelvic abscess, which required laparotomy for drainage. Three years later a second pelvic abscess developed, and for this total abdominal hysterectomy, bilateral salpingectomy, left oöphorectomy, and partial right oöphorectomy were performed. Pathologic diagnosis at this time was cervicitis. Ten months later a third pelvic abscess developed which produced left ureteral obstruction. For this, laparotomy and drainage of the abscess were performed.

The patient had then done well until shortly before this admission, when the leg swelling and abdominal pains were noted. The past medical history was otherwise negative.

On abdominal examination a large, firm, nontender mass was palpated rising out of the pelvis to the level of the umbilicus. Pelvic examination confirmed this finding. There was pitting edema of the left leg. Laboratory tests were unremarkable.

An intravenous pyelogram revealed left hydronephrosis and nonfunction on the right.

A preoperative diagnosis of recurrent pelvic abscess was made. At laparotomy a large, irregular grayish mass with multilocular cysts was detected rising out of the pelvis. The exact site of origin of this tumor could not be determined. A frozen section revealed carcinoma. As much of this cystic tumor as possible was removed, but residual tumor remained. The postoperative course was uneventful.

The patient is presented to the Tumor Board for consideration of future treatment.

Dr. William F. R. van de Graaff*: A series of X-ray examinations were done on this patient during her most recent admission. A flat plate of the abdomen revealed a homogeneous density arising from the pelvis which suggested a space-occupying lesion displacing the bowel superiorly. The clinicians felt that this mass represented a recurrence of a pelvic abscess. Pathologic gaseous distention of the small or large bowel could not be demonstrated. There was no evidence of intestinal obstruction. Calcifications could not be demonstrated.

Gynecologic lesions can be demonstrated on a plain film by a soft tissue density in the pelvis or by calcifications within such a mass.

The causes of calcifications in the female pelvis are numerous, but only in uterine fibromyomata and ovarian dermoid cysts does calcification occur with any frequency. In fibroids the calcifications occur as numerous, irregular deposits. The periphery of the mass shows a more regular calcification. These calcifications may be seen in multiple tumors.

Dermoid cysts may show mural calcifications or dental structures. The high fat content of the cyst will produce an area of increased radiolucency with rather definite margins. This should be differentiated from gas in the bowel and if translucency persists as a constant finding, i.e., after a cleansing enema, the diagnosis of a dermoid cyst may be assumed. Calcifications in other gynecologic diseases are rare. Calcification of a tuberculous pyosalpinx may occur. An ovarian fibroma may show calcification and even ossification. In exceptional cases calcifications can be demonstrated radiographically in a malignant tumor. According to some authors the psammoma calcification in papillary ovarian tumors and their metastases, although rarely seen, is rather characteristic.

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* Instructor in Radiology.

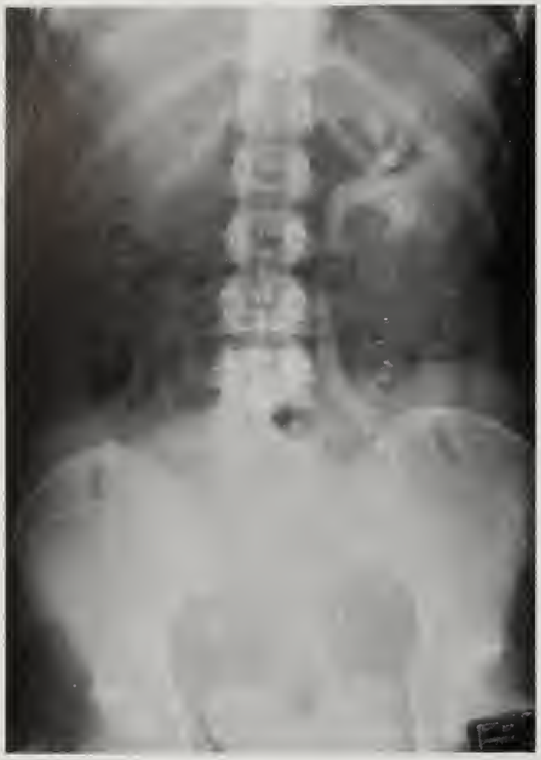

FIG. 1. Soft tissue mass rising out of pelvis to level of iliac crests, obstructing both ureters and producing hydronephrosis and hydroureter on the left. Right kidney shows no function; bladder is compressed from above; intestines are displaced superiorly.

The intravenous pyelogram shows a hydronephrosis of the left kidney and dilatation of the upper two-thirds of the left ureter. There was no excretion of the dye by the right kidney. The bladder appears to be compressed from above (figure 1).

The barium enema shows the sigmoid colon to be displaced to the left and compressed by the tumor.

Our interpretation is that a large mass arising in the pelvis is compressing both urinary and intestinal tracts.

DR. CHARLES F. GESCHICKTER*: The surgical specimen consisted of a large tumor, an ovarian cyst, and a portion of the vaginal wall. The tumor was composed of cysts filled with hemorrhagic fluid or with grayish viscous fluid.

Microscopically, sections of the tumor show ovarian tissue in which there is, as you see, a hemorrhagic corpus luteum. Under low power, many cystic spaces filled with mucoid material are seen next to the corpus luteum. High power shows these cysts to be lined by a single layer of tall columnar cells with slightly pleomorphic nuclei. There is, however, no evidence of stromal invasion.

Section of the ovarian cyst shows the ovarian stroma to be hemorrhagic. One surface, which appears to be a wall of a large cyst, is covered by several hyperchromatic cell layers, forming small acinar structures in certain areas. These acini are irregularly arranged and are lined by pleomorphic anaplastic cells. The other surface of the same section contains cystic spaces lined by tall columnar cells, so-called "picket-fence epithelium," and they are filled with mucoid material. The cysts in this area are still benign (figure 2).

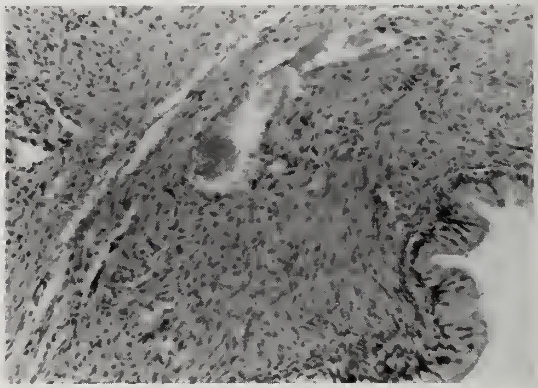

FIG. 2. The ovarian cyst showing an island of tumor cells in left upper corner, the cells being arranged in an acinar pattern. Below and to the right is seen a benign cyst lined with so-called "picket-fence epithelium."

Section of the vaginal wall shows fibromuscular tissue that is, in one area, diffusely invaded by tumor. The neoplastic acini are lined by pseudostratified hyperchromatic cells, having pleomorphic vesicular nuclei and acidophilic cystoplasm. Occasionally mitotic figures are seen. Some of the acini are filled with cell debris and leukocytes. No mucoid material is found in those spaces. In others there are glandular spaces surrounded by a rim of endometrial stroma. These glandular spaces are lined by benign columnar cells.

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* Professor of Pathology.

Our final diagnosis was pseudomucinous cystadenocarcinoma involving the ovary, the peritoneum and the vaginal wall.

DR. ANDREW A. MARCHETTI*: A dilation and curettage was performed and a postoperative pelvic abscess developed. The timing of an elective or diagnostic dilation and curettage with reference to the phases in the menstural cycle is important. It is better to do this procedure in the proliferative or pre-ovulatory phase. In the postovulatory or secretory phase, increased vascularity, the presence of increased intracellular glycogen, and some congestion or edema of the tissues constitute a better medium for the introduction, growth and dissemination of infection. This patient might have been spared this complication had the dilation and curettage been deferred to the pre-ovulatory phase.

In reviewing the slides of this tumor which was most recently removed, I would agree that it represents a pseudomucinous cystadenocarcinoma. We all know that the prognosis of adenocarcinoma of the ovary is notoriously poor. Too frequently this disease does not manifest itself until it has already disseminated throughout the peritoneal cavity and has greatly involved the omentum. In a goodly number of cases treatment of adenocarcinoma of the ovary is, at best, only palliative. At the time of operation we remove as much of the original tumor as possible and in addition remove involved portions of the omentum. Occasionally a patient may benefit from repeated laparotomies with palliative removal of recurrent tumor.

Even the removal of a benign pseudomucinous cystadenoma of the ovary can be dangerous, for spillage of this tumor can eventually lead to the very serious complication of pseudomyxoma peritonei.

This leads me to comment upon the technic of removing ovarian cysts or tumors. The importance of removing an ovarian tumor intact is self-evident. Spillage from some ovarian cysts or tumors can be treacherous. If the size of the ovarian cyst is so large that an attempt to remove it intact is not feasible, one may decompress it by introducing a trocar through its capsule. To avoid spillage from this puncture, the adjacent area should be carefully packed off, and the puncture site should be encircled by 2 purse-string sutures. One of these is tied immediately after the trocar has been introduced, and the second, outer, purse-string suture should be tied after the trocar has been removed. Enough decompression of the cyst should be effected to make removal easier. The most vulnerable point for rupture of the cyst wall is where it comes in contact with the promontory of the sacrum. At this point adhesions or thinning out of the capsule may have resulted from the trauma which has taken place between the promontory of the sacrum and the cyst wall. Hence, it is advisable to avoid any further trauma to this area and to approach this point with great care. There are also times when one finds it necessary to cut and ligate the pedicle before the cyst has been freed from the peritoneal cavity. This technic at times will increase the maneuverability of the cyst and make its removal easier.

In cases of unilateral cysts or tumors of the ovary the question of what to do with the other ovary is often raised. Obviously, this depends upon the pathologic condition in the diseased ovary, the age of the patient, and the desire by the patient for the preservation of menstrual function and future pregnancies.

As to the future treatment of this patient, I would not suggest any form of radioactive isotope therapy at this time, since I believe that the possibilities of blind pocketings and multiple adhesions would make this form of treatment difficult. Since she is asymptomatic at present, I believe that further treatment should be deferred until it is symptomatically indicated.

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* Professor of Obstetrics and Gynecology.

DR. FRANKLIN BRAYER*: I agree with Dr. Marchetti that in view of the probability of multiple adhesions with pocketing in the peritoneal cavity radioactive isotope therapy is not desirable at this time. Radioactive isotopes should not be injected into the abdominal cavity if there is a danger that the drug will be pocketed and exert all its radioactive effect on a small area. Rather severe local radiation damage occurs when all the isotope is unknowingly restricted to a small area.

It should be emphasized that isotope therapy or chemotherapy for a cancer patient, such as this one, are strictly palliative measures. In properly selected cases morbidity is frequently reduced by the use of radioactive isotope therapy or chemotherapy, but I do not know of any valid statistical indication of any increase in survival time as a result of this type of therapy. If non-resectable carcinoma had been suspected at the time of operation, 2 polyethylene catheters, placed high and low in the peritoneal cavity, would have facilitated the instillation of the radioactive isotope. The surgeon should place the catheters in such a position that pocketing of the injected material would be avoided.

I do not believe the use of radioactive isotope, either Au^{198} or chromic phosphate suspension P^{32}, would add appreciably to the clinical management of this patient. If one were to use radioactive gold, approximately 100 or 150 millicuries would be instilled into the abdominal cavity. Because it is safer to administer and because it has the same therapeutic effect, I prefer to use a chromic phosphate suspension. It is the phosphorus in this agent that is radioactive. It can be instilled in amounts of 7 to 20 millicuries into the abdominal cavity.

In this particular patient, when she becomes symptomatic, one could certainly consider chemotherapy. Of the number of alkylating agents available, Thio-Tepa or nitrogen mustard would be most suitable. Thio-Tepa can be used in doses between 10 and 50 milligrams for instillation into the abdominal cavity. Nitrogen mustard can be used in a dose up to 0.4 mg. per kilogram. In my own experience I have had the best results with nitrogen mustard. It has a serious disadvantage in that it causes rather marked nausea and vomiting which may occur within 2 hours after administration and persist for 24 hours. In very sick patients this may be a serious side-effect. This patient with a pseudomucinous carcinoma is less likely to respond to chemotherapy than if the tumor were of the serous variety. However, it certainly is worth consideration if and when the patient becomes symptomatic.

Although there may be some debate as to whether or not the patient should be treated now with chemotherapy or whether one should wait for active symptoms, I believe that more is to be gained by waiting. This is based on the fact that the alkylating agents are bone-marrow depressants and once the bone marrow has been depressed to a significant degree by what one might call prophylactic palliation, further increases in dose of the chemotherapeutic agent are contraindicated. In other words, depression of bone-marrow function produced by chemotherapeutic agents must be balanced against the effect of the drug on the tumor. As already indicated, therapy of any type in this particular kind of cancer is not likely to be very effective.

Decision of the Board: Observation, and systemic nitrogen mustard therapy when symptoms warrant.

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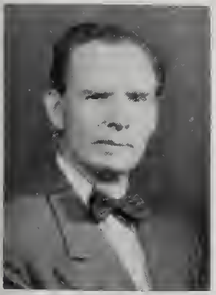
* Assistant Professor of Medicine.

PRESIDENT'S PAGE

THE PROBLEM IS FEES



Although three-fourths of the cost of medical care is for other than the services of physicians, their charges continue to top the list of items responsible for the public's questionable image of the doctor. Furthermore, physicians are generally held to be largely responsible for the other three-fourths of the cost because their recommendations and orders are leading determinants in the requirement for all health care. Even if unpublished and vaguely delineated, schedules still are necessary as guide lines for most considerations of cost.

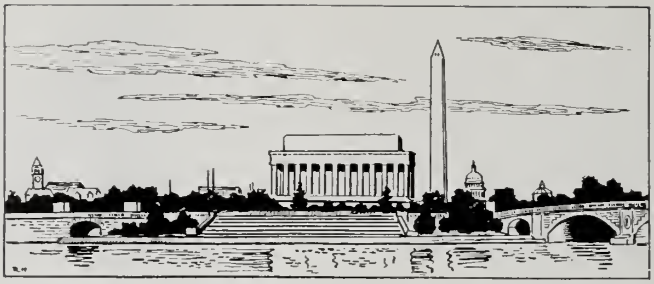
Fee schedules combined with estimates of utilization frequency are the essence of rate-making in prepayment. Since health insurance has become so widespread and since the demand is for ever-increasing scope of benefits and adequacy of payment, it is plain that physicians must become increasingly involved in prepayment. They alone can effectively keep utilization at optimal levels and can set fees that are fair to the public and physicians alike.

All efforts in this direction, however, will be effective in proportion to the numbers of participating physicians and the extent of their individual commitments to play their parts properly.

Organized medicine and its agencies must work under carefully planned and scrupulously followed routines of management. The tools of professional consensus must be strongly forged and fearlessly used for the common good.

The Blue Shield Service Index, described in an accompanying editorial, is such a tool. It certainly will be of great value and may prove to be the most effective single mechanism to preserve our fee-for-service form of practice. It deserves careful study, sympathetic understanding, and firm support in use by every one of us.

Donald Stubbs



EDITORIALS

THE BLUE SHIELD SERVICE INDEX

It has become increasingly clear that the physician service fee schedules which have been multiplying in explosive fashion constitute a runaway problem highly dangerous to the future of prepayment. In this instance local option has resulted in chaotic variety which serves no useful purpose and may appear to an anxious public to be either the result of stupid management or an attempt to cover up true cost with a blanket of confusion.

Recognizing that local variations in level of cost for services is justified but that the relationships among like items in different schedules should be uniform, many have embraced the logic of relative value scales. It is less commonly realized that every fee schedule in existence is of itself alone a relative value scale. Furthermore, Blue Shield Plans trying not to meddle in the theory of fee setting, if Medical Societies could be persuaded to do it, have contented themselves with simply haggling over dollar marks in somewhat haphazard fashion. Finally, the AMA has encouraged local experimentation with relative value scales but has balked far short of leadership toward national coherence.

All this can be so destructive of Blue Shield's ability to deal with national accounts that once again necessity needs to mother worthy invention. Not the least element of this necessity is the fact that 2 of every 3 workers in groups are today employed by organizations with installations in more than one state. For us here in Washington it is most significant that half of our patients are in one national group, the Federal Employees.

And so the stage was set for decisive action at the annual conference of Blue Shield Plans in Chicago in April. The Enrollment Committee, reporting on a year's study of basic considerations of what must be done to maintain Blue Shield in voluntary physician prepayment dominance, urged approval in principle of the Composite Professional Service Index as embodied in the report of the Committee on Professional Service of the National Account Agreement. The reports and recommendations of both committees were adopted without dissent by the Board of Directors of the National Association of Blue Shield Plans and later by the full conference of all Plans.

In May the Board of Trustees of Medical Service of D. C. approved in principle the use of the Composite Index for the National Account Agreement and for local use when feasible. This position was supported without dissent by the annual meeting of Participating Physicians of the Metropolitan Area, and now is before all 6 of the involved Medical Societies.

What is this Composite Index which has received such complete acceptance in principle so quickly? In simplest terms it is the exact sta-

Opinion expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia

tistical consensus of the multiplicity of fee schedules for 47 million Blue Shield subscribers. It is an accurate measure on one scale of the status quo in the payment of 2 million dollars a day for physicians' services. It is an index which by the use of locally determined conversion factors (either uniform across the board or segmented for such parts of the scale as medicine, diagnostic services, etc.) can be used to provide fair fees for any income level and any scope of service.

Thus it is a tool which must be studied in its completed form by every physician so that our approval in principle can become specific approval in detail. The development and use of this index must be recognized to deserve top priority. It is a compass to guide us out of the woods.

Donald Stubbs, M.D.
Director-at-large, National Association of Blue Shield Plans

CHRONIC DISEASE

The magnitude of the chronic disease problem, although not measurable to a specific degree, nevertheless is evident to all who are concerned with preserving and restoring the health of our people. The problem is revealed in part by the numerous deaths from cardiovascular disease and cancer.

The costs of chronic disease can be measured in part from public expenditures to maintain long stay hospitalization and to provide public assistance to the needy among whom sickness looms large as a cause of dependency. Besides these statistical aspects of chronic disease, its personal tragedies touch the lives of nearly every household in our neighborhoods.

In 1960 the total deaths in the District of Columbia were 8,655, of which 4,079 were cardiovascular deaths, 1,426 were cancer deaths, and 3,150 deaths were due to other causes, while for the year 1950 these figures were 8,650, 4,279, 1,251, and 3,030.

Causes of Death	Age Groups			
	Total	Under 44	45–64	65 and over
Cardiovascular	4,079	219	1,168	2,692
Cancer	1,426	148	644	634
Other	3,150	1,398	895	857

A special study of dischargees from the D. C. General Hospital for 1956 reveals that 20 per cent, or 5,717 dischargees, were related to chronic disease diagnostic categories.

Chronic illness and disability are of such major importance to public health that concentrated efforts toward preventive measures and multiphasic screening should be emphasized, particularly directed to the medically indigent group. Prevention in its broad sense means preventing disease, and includes all measures which halt progression of disease to disability or death. The District Medical Society's Committee on Public Health has worked closely with the D. C Department of Public Health in developing the chronic disease–cancer detection profile screening program.

The District of Columbia was fortunate to receive a Federal grant from the Public Health Service for a Community Cancer Demonstration Project for a 3½ year period. The purpose of the project is to:

1. Demonstrate how existing knowledge from research can be applied as a casefinding technic to a large public health clinic population (medically indigent group) not now receiving screening tests for cancer.
2. Demonstrate how the application of this technic can be used to discover cancer and precancerous conditions.
3. Demonstrate whether, or how, early detection of cancer and precancerous conditions can reduce cancer mortality and morbidity in the District of Columbia.

At the Northwest Central Health Clinic a study for the fiscal year 1960 reveals that the rates per 1,000 persons for positives or suspects found by the following screening procedures were:

Screening Procedures	Rates per 1,000 Persons Screened
70 mm. X-ray screening:	
All abnormal	64
Tuberculosis	3.6
Cardiovascular	34.3
Cancer and other conditions	26.1
Syphilis (serologic test)	83
Diabetes (blood sugar)	61
EKG	179
Papanicolaou cytology	8
Glaucoma (ocular tension)	78
Physical examination:	
Precancer and cancer	21
Cardiovascular	119

NOTE: By far the majority of the above findings were previously not known, and this further validates the effectiveness of this program.

In order to increase emphasis and further develop the D. C. Department of Public Health screening program to its maximum community effectiveness, an Advisory Committee is being set up. The membership of the Cancer Coördinating Advisory Committee is:

- Dr. J. Keith Cromer, Chairman, Committee on Cancer Control, The Medical Society of the District of Columbia
- Dr. Warren J. Strudwick, The Medico-Chirurgical Society of the District of Columbia
- Dr. Beveridge Miller, D. C. Division of the American Cancer Society
- Mrs. Edward B. Morris of the Public Health Advisory Council
- Dr. John R. Pate, Chief, Bureau of Disease Control, D. C. Department of Public Health
- Dr. Daniel Leo Finucane, Director of Public Health, *ex officio*
- Dr. Frederick C. Heath, Deputy Director of Public Health, *ex officio*

The program, with the assistance of the Public Health Service, was developed on firm public health principles. However, it is still in the stages of development. When this program has reached its maximum level of effective performance, it will help to fill an increasing community need of the medically indigent group for this type of preventive public health service.

DANIEL LEO FINUCANE, M.D.
Director of Public Health
for the District of Columbia

COMMISSIONERS' YOUTH COUNCIL AND THE WHITE HOUSE CONFERENCE

Recently a booklet from the AMA, entitled "The Medical Society's Role in Implementing Recommendations from the Golden Anniversary White House Conference on Children and Youth," was sent to members of our Medical Society. In this booklet a large number of recommendations are pointed out which concern our profession. They range from health problems dealing with nutrition, immunizations, anomalies and retardation, through mental health and emotional disturbances, to social and cultural status and economics. These recommendations apply not only to private practice but to community programs in which the profession is increasingly concerned.

Medical participation in White House Conferences prior to 1960 had been practically nonexistent. In 1960 some 225 physicians participated in the Conference. This indicates not only an increasing interest by the profession but a recognition of what the profession can offer toward solving medical socioeconomic problems.

In Washington the "follow-up" and implementation of the recommendations have been delegated to the Commissioners' Youth Council. The Council was organized in 1953 by the Commissioners of the District of Columbia. The Council consists of 19 appointees of the Commissioners and 6 *ex officio* members, heads of the District Departments of Health, Welfare, Recreation, Schools and Police. The staff is headed by an Executive Director and 9 Area Board advisors oriented in social work. Committees of the Council study and activate such programs as Health, Recreation, Family Responsibility, Religious Life, Education and Employment, and Gangs. They function through the staff advisors to the Area Boards. The committees maintain close liaison with the Youth Aid Division of the Police Department, the Recreation, Health and Public Welfare Departments, the U. S. Employment Service, and the Juvenile Court.

The Area Boards are the backbone in all these activities since they organize recreational and social programs at the local level, using many church facilities in the neighborhoods. The Council in turn gives its utmost in support of such projects, which are tuned to the prevention of deviant behavior and predelinquent activities.

The Youth Council in the District of Columbia has received recognition over the country for its unique activities on a local level, many of which have been adopted by other cities. The Council may accept funds, in addition to its official budget, to underwrite such specific studies as the Maximum Benefits Project. This Project was based on the need to evaluate improvement in total welfare and learning in a given underprivileged area where medicosocial and economic assistance were supplied.

Not only should the public give the Council its wholehearted support, but medicine has a responsibility to participate actively at every opportunity. We as a profession, interested in the total welfare of children and youth, have certain knowledge not available to any other discipline.

Preston A. McLendon, M.D.
Chairman, Commissioners' Youth Council

HOSPITAL ADMISSIONS CAN BE INCREASED

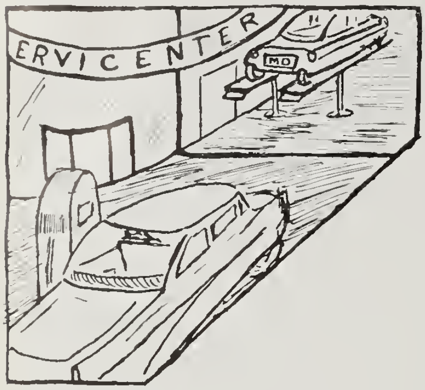
At various periods during every year many of the local hospitals have demands for beds that cannot be provided. The admission of very ill patients at such times presents a situation impossible of solution, much to the regret and discomfiture of the hospital's management. On the other hand, there are times, such as during holidays, inclement weather, religious and ceremonial events, that the hospital census sinks to a disturbing low. It is self-evident that no one or any group can regulate or anticipate the visitation of illnesses or demand for hospital facilities in any community.

Since the introduction of prepaid hospitalization, the number of persons availing themselves of institutional care has increased faster than the rate of population. More hospitalization is used because it has promoted better health, is economical to the patient, is satisfying, and is often pleasant. The average stay in days in a hospital is between 7 and 8, or even less, but if the record of days in the hospital is checked, there is noted quite a variation. It will be found that many patients who have had the same operation or illness as the 7- or 8-day patient remain more than 7 or 8 days. A detailed analysis of these "long-timers" will disclose that the extra days in the hospital were not used on account of illness but because it was not convenient for them to return home for various reasons, and the hospital is a good boarding-house, charged to the Blue Cross. This is unfair and is an imposition on this truly worthy organization.

This practice of allowing patients to remain in the hospital longer than is actually required should not be permitted or encouraged by the attending physician. This not only deprives ill patients from obtaining accommodations but is costing the Blue Cross a considerable sum annually and eventually raises the cost to the subscribers.

If every physician felt it his duty to dismiss his patient promptly, he would not only feel right about it ethically but he would realize that he could have more patients admitted under his care. Another word might be added on the subject of expense, especially to Blue Cross. Loading up the patient with a "bundle" of drugs on the day of dismissal, charged to Blue Cross, does not seem to be "cricket."

C. S. W.



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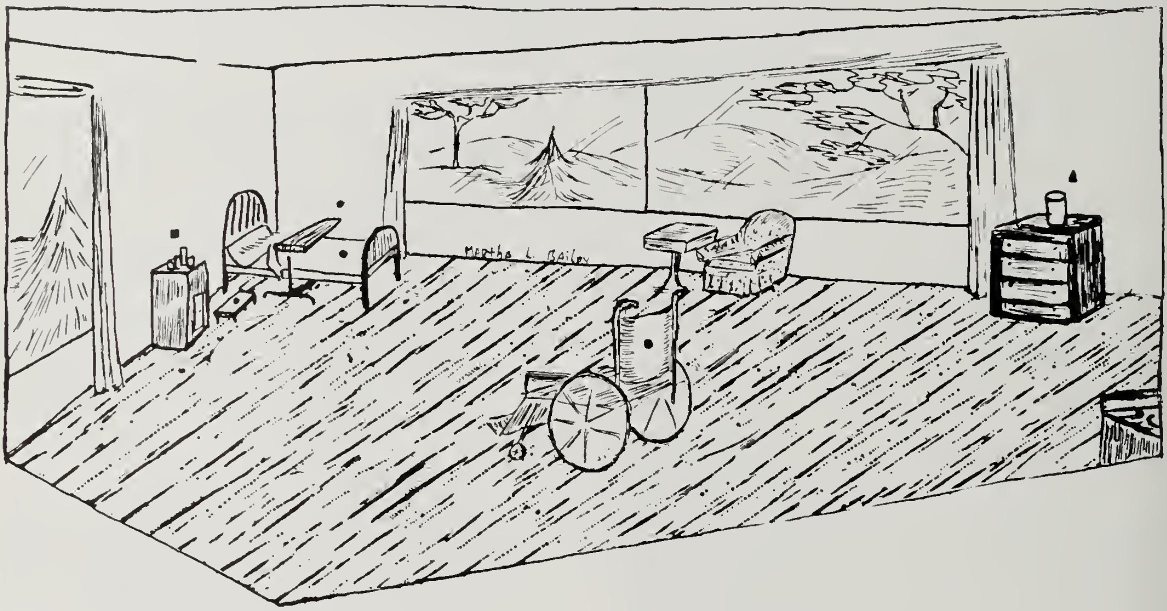

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MEDICAL ECONOMIC REALITIES OF THE 1960's

RAY E. BROWN

Superintendent, University of Chicago Clinics

My topic is the general one of medical economics, but I will confine my discussion to hospital economics. This is being done for several reasons. First, time will not permit me to do more than a sketchy coverage of even the more restricted topic. Also, I am much better informed about the nature of hospital costs since my research has been largely confined to that aspect. More importantly, it is hospital costs that are provoking so much public interest today. The public oftentimes speak of rising medical costs, but this is a generic term and they really are referring to hospital costs. Actually, the doctors' fees have not increased to any great extent during the period since 1946, while hospital costs have risen rapidly.

ACKNOWLEDGMENT

This is the third in a series of talks given at the Forum on General Problems in Medical Practice, held at the Hotel Statler-Hilton in Washington, D. C., October 29, 1960, under the auspices of The Medical Council of the Washington Metropolitan Area. Hosts: Peoples Drug Stores, Inc. Reprints may be obtained upon request from the Medical Society of the District of Columbia, 1718 M Street, N.W., Washington 6, D. C.

Hospital costs are a very pertinent and relevant topic to discuss with doctors, however. There are several reasons why this is true. Modern medicine has made the doctor dependent upon the hospital, and whatever happens to the hospital will vitally affect the doctor. Likewise, it will vitally affect the doctor's patients. Further, the doctor actually is the major factor in determining the level of several aspects of hospital costs. The decisions made by the patient's physician determine the services the hospital renders. To a large extent the composite of decisions made by doctors represents the activities of the hospital. It is urgent that doctors understand hospital costs and the factors that influence those costs. Their understanding is the best protection that hospitals can have during a period when the hospital economy is faced with such severe problems of adjustment.

One of the best known facts in this country is that hospital costs have risen very rapidly since the end of World War II. The man on the street has seen this fact publicized so often in his newspaper and national magazines that he no longer considers it news. He knows that hospital costs get higher by the year but he doesn't know how or why. His personal experience with hospital costs is most likely to have been an indirect one since more than two-thirds of hospital patients depend upon third parties to pay all, or part, of their hospital bill.

Most often, when an American speaks of hospital costs, he is thinking of his Blue Cross or insurance costs. He is quite correct in measuring his hospital costs on that basis because that is the way he most often pays them. He is not correct in his thinking, however, unless he is much more sophisticated in hospital economics than the average citizen. He is probably blaming the full impact of increasing prepayment rates upon a rising cost per patient day of hospital care. While costs per patient day have risen dramatically in recent years, they represent only one facet of the increasing expenditures experienced by prepayment plans.

Blue Cross and hospital insurance costs are the function of 4 independent variables. Any of these elements can move upward, or downward, independently of the other and thus independently influence prepayment costs. These variables consist of costs per patient day, admissions per 100 of the population, length of stay, and the scope of benefits provided by prepayment. Only in the first variable does the hospital have any important influence. The influence of the hospital on the costs per patient day is far from complete and perhaps is quite nominal. The following examination of the 4 independent variables suggests that this is true and that the hospital largely mirrors the economic, cultural, and medical forces generated by its environment. In a way, the voluntary hospital is a most involuntary institution so far as controlling its own operations and utilization is concerned.

COSTS PER PATIENT DAY

These costs represent the operating costs of hospitals, and their increase has been both rapid and dramatic. Since the removal of price and wage controls in 1946 the average cost per patient day of hospital care in the general hospitals of this country has increased from $9.39 in that year to $30.19 in 1959. This represents an increase during the period of 221 per cent. During the same period the cost of living index increased from 83.4 to 124.6, or an increase of 49 per cent. This means the average cost per patient day of hospital care in the general hospitals of the United States has risen about 4½ times as rapidly as the cost of living in general during a period when the general cost of living itself was very inflationary.

The picture of rising operating costs is clear and simple. The reason why this rise has occurred is as equally clear and simple if one examines the major factors involved. It lies principally in the nature of hospital service. Hospitals are personal service enterprises, and this means that their service is mostly rendered by people rather than by machines. About ⅔ of every hospital dollar is spent for payroll. In the manufacturing industry the expenditures for payroll represent only 28 per cent of total costs. An examination of the payroll picture in hospitals since 1946 reveals the cause and the importance of the increased payroll costs.

In 1946 hospital costs of salaries for all general hospitals averaged $4.98 per patient day. By 1959 this cost had increased to $18.76 per patient day, an increase of 277 per cent. While overall costs per patient day were climbing 221 per cent during the 13-year period, payroll costs per patient day were increasing 277 per cent. Actually, if we remove the increased cost of wages from the overall costs we find that nonwage costs increased only 159 per cent. The increase in wage costs was due to an increase in both the amount paid per worker and to an increase in the number of workers. Actually, 54 per cent of the increased wage costs in hospitals since 1946 has been due to salary increases and 46 per cent has been due to added personnel. In 1946 the average annual salary of a hospital employee was the low sum of $1,228. For this sum the average employee worked 46 hours per week, had no Social Security and no hospital-financed retirement plan. In 1959 the average hospital employee was making $3,068 annually, was working an average of 42 hours per week, had Social Security, and most likely had a hospital-financed retirement plan. He was still a good bit behind the average paid all nonagricultural workers in this country, but he had had a stiff shot in the salary arm toward removing the differential. In 1946 the average annual salary of all nonagricultural workers in this country was $2,420 per year. This increased to $4,250 by 1959, or a percentage increase of 76 per cent. The increase in the hospital employees' annual salary during the period averaged 150 per cent, or about twice the average increase given to all other workers in this country. Parenthetically, one might say that the figures above provide an answer to 2 different groups who are highly critical of hospitals today. Those who complain of hospital costs cannot argue that hospitals are overpaying their employees in comparison to other employees in this country. Neither can the unions, which are attempting to organize hospital employees, argue that hospitals have not made rapid progress in improving hospital wage scales.

The impact of wage increases on hospital costs is much greater than the effect of wage increases on the unit costs of most other industries. This has to do with the fact that hospital service is a personal service and is rendered largely by people rather than by machines. The influence of payroll on hospital costs, as contrasted with manufacturing industries, is demonstrated by the following figures. The U. S. Department of Commerce reported that in 1958 payroll made up 28 per cent of the expenditures of manufacturing industries as compared to the 62 per cent of the hospital dollar going into wages. This means that the operating expenses of hospitals are affected twice as adversely as those of manufacturing industries for each dollar of wage increase granted an employee.

For another reason, wage increases have an even more adverse effect on hospital operating costs relative to those of industry. Hospitals cannot take very much advantage of the new industrial revolution of automation that has given industry an increase in productivity per worker of 3 per cent per year for the past 25 years. This increased productivity has permitted industry in general a buffer of 39 per cent of its payroll in the period since 1946 by which to absorb that much of the impact of wage increases on its unit costs. In other words, industry in general has had a leeway, because of its increased productivity, for 51 per cent of the wage increases granted since 1946. Hospitals must increasingly compete with industry for personnel and this means matching the wages and other working conditions of industry. Strangely enough, as industry improves its efficiency, hospital costs will increase. This is because industry will be able to pay higher wages for fewer and fewer man-hours per unit of production. Hospitals, however, will have to give similar wage increases without a similar reduction in man-hours per patient day of care. This means that hospital operating costs will be adversely affected by the ever-increasing mechanization in industry. Hospitals are not alone in the impact of rising wage rates on operating costs. Our schools, hotels, and department stores are also personal service industries, and their rapidly rising unit costs demonstrate that fact.

Actually, hospitals will have an increasing number of man-hours per patient day. Scientific advances of medicine have vastly improved the quality of medical care each year. Each medical advance, however, can be measured in terms of added hospital personnel. Some idea of the effects of the multitude of new diagnostic and therapeutic procedures on the number of hospital personnel can be seen in comparing 1946 with 1959. Thirteen years ago hospitals had an average of 1.48 employees per patient day of care. In 1959 this had increased to 2.23 employees. While about $\frac{1}{10}$ of this increase was due to employees added because of the shortened work week of employees, the largest part was due to new positions created because of new services. The rate at which medical science is advancing and the insistence of the public that they have advantage of each new discovery as soon as it is proven make it safe to predict that the ratio of employees to patients will continue to advance as medical science advances. It is not likely that the American public is going to permit life-saving and life-extending discoveries by medical researchers to lie unused because of necessary increases in hospital costs. Some evidence of the influence of medical advances on hospital operating costs can be shown in the extraordinary increase in the assets per bed that has occurred since 1948, in great part because of added, complex equipment. In that year assets per general hospital bed averaged $7,851; in 1959 this had increased to $16,378, an increase of 108 per cent.

This impact of medical advances on hospital operating costs can be demonstrated in still another way. If the portion of hospital costs related only to the general services provided in the daily rate in a hotel are separated from the costs of those services found only in a hospital, the comparisons between 1946 and 1959 are really dramatic. In 1946 the hotel-type costs of the hospital made up 33 per cent of the total cost per patient day. In 1959 those hotel-type costs made up only 17 per cent of the total. Stated another way, the nonmedically related costs increased 66 per cent during the 13-year period while the medically related, or nonhotel type costs were increasing at the jet-like rate of 299 per cent.

The matter of medical advances represents a conflict in the public's thinking. While there is considerable concern being expressed on the one hand regarding the increasing cost of hospital care and the increasing utilization of hospitals, there is an even stronger public pressure, on the other hand, to increase both the cost and demand for hospital care. This has to do with the funds provided for medical research. In 1946 less than $80 million was spent, from all sources, on medical research. In 1959 this total had increased to over $500 million. The recent report of the Bayne-Jones Committee, released by the U. S. Department of Health, Education, and Welfare, estimates that the total national expenditures for medical research will be over $900 million by 1970. The effects of such research effort on the demand for hospital services may be overwhelming. While some of the results of this medical research will help to prevent disease, and thus reduce the need for hospital and medical care, the most likely results will be in areas of new treatments for presently untreatable diseases. Patients who now do not go to the hospital because it is useless for them to go will become users of the new procedures and treatments developed by medical science. It is very likely that these patients will be much more than proportionate users. The unsolved problems of medical science are in general the most complex and difficult ones. Their diagnosis and treatment will require more specialized and expensive equipment and personnel.

The tremendous public support for medical research is a wise and appropriate public attitude. At the same time, however, the public must be made to recognize what it is really doing. Medical discoveries are of little value unless they are used. Those who can benefit from such discoveries will demand that they be used promptly and effectively. Hospitals and doctors have no alternative except to make such discoveries immediately available. It is highly unfair for doctors and hospitals, as a consequence of such increased use and increased costs, to be charged with overuse and disregard of costs. Every other industry assumes that its research will provide new products and consequently increased demand for its services.

Utilization of Hospital Care

Admissions per 100 of the population is a variable which too has exerted an upward pressure on the cost of prepayment. In 1946 there was an average of 9.4 admissions to the general hospitals per 100 of the population in this country. By 1959 this had increased to 12.2, an increase of 30 per cent. This increasing utilization has a logical, and a legitimate, explanation if the forces related to hospital utilization are carefully examined. These forces reflect changes outside the hospital and represent values that none of us would wish to alter or diminish.

One of the most important forces influencing the increasing utilization of hospital care is that of the dramatically improved income of the general population of this country. Our country has been undergoing one of the greatest social revolutions of history so far as income distribution is concerned. No nation has been as rich and none has spread its income over so wide a base. Personal income, after taxes, now averages over $5,200 for each of the 500 million family units in our Nation. Improved income means an improved standard of living, and good health care is one of the first items demanded by individuals whose income permits discretionary spending. This was demonstrated by comparing the 10 states with the highest per capita income in 1958 with the 10 states with the lowest per capita income during that year. The 10 states with highest per capita income averaged 123 days of hospital care for each 100 members of the population while the 10 states with the lowest per capita income averaged only 89 days of care.

The level of education is also a good indicator of hospital utilization. For purposes of this paper, a Blue Cross plan in one of the largest cities in this country compared the utilization of its membership, who were faculty members of the universities and the high schools of that city, with the utilization of one of their industrial firms, which had a membership comparable in total number and a contract similar to the one in the schools and colleges used in the comparison. The thought was that the faculties of the schools and colleges would have a college level of education and that the industrial group would have primarily a high school, or less, level of education. Both groups had an enrollment of over 10,000 members. The rate of utilization for the past 3 years by the school groups equaled 98.8 per cent of the total amount paid in to Blue Cross by those groups, while the industrial group utilized only 68.7 per cent of the total amount paid in by its group. The dramatic difference of the payout by Blue Cross for the 2 different groups provides evidence that the educational level is one of the determining factors in the usage of hospital care.

The fact that the public is recognizing that good health is purchasable is influencing the usage of hospitals. To test this assumption, data were secured from the Illinois Department of Public Health on the 9 hospitals constructed with Hill-Burton aid in counties that had previously had no hospital. The average occupancy of those 9 hospitals during the first year that they were open was compared with the average occupancy during the fifth year that they were open. After correcting for population changes in those 9 counties it was found that the average occupancy during the first year was 39.9 patients and that this average occupancy had increased after 5 years of operation to 63.0. This would seem to clearly indicate that experience in using hospital care causes an increased usage. Similar correlations with usage can be made with such factors as urbanization of the population, with the increasing number of working wives, and with certain other characteristics of the population that in themselves represent improvements in the general culture and economy of our country. All of these characteristics are ones which society is working hard to develop, and we can expect their influence to continue to grow.

The whole subject of abuse of hospital care needs to be given some very close examination before the public becomes further confused. Those members of the medical profession who seem willing to be quoted on the manner in which their colleagues, and never themselves, are admitting patients unnecessarily to hospitals should be reminded that they are doing a disservice to the public as well as to their profession. How much hospital care is enough has never been determined. One can suspect that a thorough medical examination of a sufficient sample of the population would disclose that most people do not go to the doctor as often as they should, and there are many people who could utilize hospital care to the profit of their physical condition but who never go to the hospital. To accuse the American public of being dishonest in their use of Blue Cross is a serious charge and one that has never been justified by the facts. It is highly doubtful that many members of the population go to the hospital because they have prepayment, but rather that they purchase prepayment because they want to be assured of the necessary financial resources when they do have to go to the hospital. This is in part demonstrated by the findings of a study made by Health Information Foundation. This study showed that, sure enough, individuals with insurance go to the hospital quicker than those without such insurance. But it also showed that those individuals with insurance also paid out of their own pockets twice as much for medical expenditures as did those without insurance. In other words, while the population utilizes their prepayment, they are at the same time quite willing to shell out their own personal funds for medical and hospital care.

The growth of prepayment is an important factor in the increasing utilization of hospitals. During 1959 those with Blue Cross averaged 139 admissions per 1,000 while the general population as a whole averaged only 122. As evidence, however, that they were not attempting to abuse their coverage is the fact that Blue Cross members stayed in the hospital a shorter length of time. During 1959 Blue Cross members had an average length of stay of 7.6 days as compared to the average length of stay of 7.8 days by the general population.

The seemingly widespread notion that there is extensive violation of their prepayment contracts by patients might be an indication that the prepayment contracts do not fit the public's needs. If a large segment of the public is misusing their prepayment, it might be that the coverage is inappropriate rather than the usage. There is nothing immoral in the use of a hospital if the individual is willing to pay the cost of such use and if nothing immoral is done to him while he is in the hospital. In our society the individual is permitted an option as to what he chooses to purchase with his funds. It is only when he violates the prepayment contract that his use of the hospital becomes immoral. Serious study should be given to the question of whether the prepayment coverage is realistic in terms of the use the public is attempting to make of its prepayment.

One can argue that far more waste is occurring because of nonutilization of hospitals than because of overutilization. This is due to faulty planning of our hospitals and to the manner in which the public chooses to use its hospitals. In 1959 the general hospitals of the Nation averaged only 75 per cent occupancy. This means that 25 per cent of the beds for which the hospitals were staffed were on the average unused during 1959. When this figure is applied to the total general hospital beds, it reveals that 56½ million potential days of care were wasted. The significance of this waste is seen when it is realized that all the Blue Cross plans of the Nation provided only 53¾ million days of care. This loss can be stated another way. Cost formulas show that an empty hospital bed costs over 50 per cent as much as an occupied bed. On this basis the empty beds in general hospitals cost the Nation over $650 million in 1959. Those empty beds also represented over $4¼ billion in idle capital funds.

It is admitted that a hospital cannot average a hundred per cent occupancy. It is not admitted, however, that hospitals cannot efficiently operate well above the current average of 75 per cent. If one examines the factors that have strongest influence on the level of occupancy, it is apparent that those factors are not related to quality of care and are controllable if the public itself is willing to control them.

The 2 most important factors influencing hospital occupancy are the small size of hospitals and the manner of use of hospitals. The effect of size is easily demonstrated from statistics shown in Part II of the August 1, 1960, Guide Issue of *Hospitals* magazine. During 1959 the short-term general hospitals of the Nation presented the following average occupancy picture when grouped by size:

	Per cent
Less than 25 beds	54.5
25 to 49 beds	60.0
50 to 99 beds	66.8
100 to 199 beds	74.2
200 to 299 beds	78.7
More than 300 beds	80.6

The major reasons for this effect of small size on average occupancy are concerned with the numerous rigidities on use. These rigidities increase in intensity of effect in inverse ratio to size. In different words, it is a matter of pooling rigidities so as to spread, and thus diminish, their effect over as large a number of beds as is feasible.

The effect on occupancy of the manner in which hospitals are used can also be clearly demonstrated. Hospital occupancy fluctuates sharply by days of the week, by certain months of the year, and over holiday periods. Almost universally the variation is downward by about 15 per cent over weekends as compared with other days of the week. This tendency of the patient to observe a 5-day week is almost equaled by a similar tendency to observe holidays and vacation months. The average occupancy nationally drops more than 16 per cent during the heavy vacation month of August as compared with February. Any notions about more illness in winter being the reason for these effects can be disproved. During December, which happens to be a bad weather and heavy holiday month, occupancy runs more than 13 per cent less than the following month of January. However, weather of the sort that permits the public to golf, swim, and entertain in the patio does have its influence. The average occupancy of the Nation's general hospitals is about 14 per cent less during July, August, September than during January, February, March. The statistics all add up to the fact that the public demands convenient use, rather than efficient use, of their hospitals. This eccentric use does not imply unnecessary use. A high percentage of the most necessary hospital admissions consists of conditions that permit a time latitude of several weeks in start of treatment.

Efficiency in Hospital Planning

Planning could reduce substantially the effects of inefficient size. Efficient size is a matter of pooling a sufficient amount of need so as to produce the volume of use necessary for the most efficient-sized hospital. There is no need in this discussion to spell out the exact size which represents the most efficient-sized hospital. As long as some 92 per cent of our general hospitals have less than 300 beds, we do not need to worry about the maximum size. We need worry even less as long as more than 64 per cent of our general hospitals have less than 100 beds and more than 40 per cent have less than 50 beds.

The only essential limitation on pooling the need for hospital facilities is the factor of adjacency. This factor has been greatly overstressed. The medical importance to the patient of having a hospital a few minutes away simply has never been demonstrated. It becomes less demonstrated each year with the modern automobile and the modern highway. The importance of adjacency was disproven some years ago in the case of another community agency. The consolidation of public schools has demonstrated that distance was much less important than the advantages that went with larger sized units. Again, for purposes of this discussion, we do not need to define precisely how close everyone should live to a hospital. Admittedly, many of our small hospitals are justified because of this distance factor. But an examination of the statistics impresses one with the idea that distance is not the principal factor behind the large number of very small hospitals. Too many small hospitals are located in large cities and nearby each other. The essential point is that the public, as well as hospital trustees and doctors, realize the great cost of unutilized hospital beds and subordinate some of their personal interests to overall community planning of hospital facilities.

Unless we can develop the sort of hospital statesmanship that assures proper planning on a voluntary basis, we must be prepared to accept forced planning by Government. The financing of hospitals is now very much a public matter inasmuch as the general public is paying the cost by monthly general assessments through prepayment plans. State insurance commissioners have intervened in several states and attempted to control the financing of hospitals through the mechanism of controlling prepayment charges to subscribers. Hospitals have quite properly resisted this approach to control. This approach has all the evils of price control without demand control. The inevitable result would be increasing service without sufficiently increasing funds. This can only result in a deterioration of care. If public control becomes necessary, it should be done through control of the number and location of hospital beds.

Length of Stay in Hospital

How long patients stay in the hospital is as important as the question of how often they go. This variable has worked in favor of holding down prepayment costs during the period studied in this paper. In 1946 patients stayed an average of 9.1 days for each admission. In 1959 they stayed only 7.8 days. This reduction in length of stay served to help cushion the effects of rising costs per patient day and the increasing rate of admissions. It has apparently spent its effect, however, and will very likely be on the side of increasing costs in the future. Length of stay reached its low point of 7.6 days in 1956 and remained at that figure until 1959. The increase to 7.8 days in 1959 resulted from forces that will gain intensity in the future. An increase in the number of aging in the population will increase the incidence of degenerative diseases. It is these diseases which require the most intensive care and the longest periods of hospitalization. Medical advances will also contribute to increased length of stay as ways are found to treat conditions previously untreatable. In general, the untreatable becomes treatable only through complex and difficult procedures that require intensive and prolonged hospitalization. Most of the decrease in length of stay was due to the use of antibiotics in treating the germ-related diseases. These gains have now stabilized and the influence of the antibiotics cannot be expected to produce further decreases in hospital stay.

Expanding Benefits and Costs of Prepayment Plans

There has been a steady increase in the scope of benefits provided by prepayment coverage under Blue Cross or other insurance contracts during recent years. The earlier contracts provided the barest sort of benefits. Most plans, only a few years ago, provided no more than 30 days of care per year, excluded many types of illnesses, and limited the payments for various drugs and procedures. Because of public demand for comprehensive coverage, most plans now allow as much as 120 days of care annually and have practically no exclusions. This still does not satisfy the public, and one can almost predict that the benefits will continue to be broadened and that ambulatory care in the hospital will gradually be given much fuller coverage.

The broadening of coverage, coupled with recent medical advances, has increased the cost of prepayment in still another way. Until very recent years the general hospitals admitted very few mental and tuberculosis patients. The development of tranquilizing drugs has permitted the psychiatric patient to be admitted to the general hospital without hazard to other patients and hospital personnel. Presently, over 3 per cent of all general hospital beds are devoted to psychiatric patients. These patients accounted for over 2 million days of care in 1959. The development of drugs that permit intensive treatment of the tuberculosis patient, and that remove most of the contagious hazard, has caused a growing increase in the admission of those patients to the general hospital. All over this country we now see tuberculosis hospitals closing and an actual reduction in the admissions to the large state mental hospitals. Heretofore, both tuberculosis care and mental hospital care have been provided at the taxpayer's expense. The admission of these patients to the general hospitals will reduce the taxpayer's burden but will significantly affect the cost of prepayment plans, which will in the future be picking up the tab for the care of an increasing number of those patients.

The change in the age characteristics of the population will also have an important impact on the size of the monthly prepayment fee. This has to do with the increased number of individuals covered under the average family contract. It is predicted by the population experts that by 1975 our population will increase about 29 per cent over the total this year. The largest part of this growth, however, will occur at the 2 extremes and the number in the working ages will increase much less rapidly. Those under age 18 will increase at a rate of 35 per cent, and those over age 65 will increase at a rate of 52 per cent. In the meantime those of working age, who must pay the prepayment bill, will be increasing only at the rate of 20 per cent. This means that the monthly prepayment charge will have to be higher for this reason alone because it will be covering a larger number of individuals. As mentioned earlier, the rapid increase in the number of individuals over

65 also will have a very important effect on the utilization of hospitals. Several studies have been made on this question and all of them indicate that those individuals over age 65 use, on the average, between 3 and 4 times the number of days of hospital care per year as do those under age 65. The problem of financing the medical and hospital care for the aging members of our population represents the most serious challenge faced by our voluntary system of medical care.

CONCLUSIONS

In closing this discussion, it should be stressed that hospital costs will continue to rise so long as wage levels in this country rise, and so long as medical advances continue. Further, that utilization of hospitals will continue to increase so long as our standards of living, of education, and the growth of other desirable cultural forces increase. There is no reason to believe that any of these forces will not continue to increase. Neither is there any reason for American medicine and the American hospital system to apologize as this occurs. No greater compliment has ever been paid to a profession or an industry in our country than the increasing demand being made for medical and hospital services. The important task is to see that every effort is made to control any unnecessary costs and use, and to be sure the public understands the forces that underlie the increasing cost and utilization.

The public will not blame its doctors and its hospitals for the efforts doctors and hospitals are making to meet the public's demand for quality care and the necessary costs that inevitably must accompany that care. The public will blame doctors and hospitals if they permit the public to take misguided action that reduces the quality or quantity of that care because of public lack of understanding of the forces that affect the cost and utilization of medical and hospital care. Hospitals must make every effort toward efficient operation and utilization. At the same time, however, hospital trustees and administrators must work aggressively and unceasingly for better quality of hospital care and better quality prepayment coverage.

We now have the finest system of hospitals in the world because our hospitals have responded to the public's demand for the best. Our voluntary system of hospitals can expect to survive only as long as it continues to measure up to that demand.

MEDICAL STATISTICS

During 1960 almost 1 out of every 5 contacts between U. S. patients and physicians in private practice did not involve actual sickness or injury. Figures released by the National Disease and Therapeutic Index (N.D.T.I.), a continuing statistical survey of private medical practice, attributed 18 per cent of all patient visits to special conditions without sickness. Prominent among these special conditions were prenatal care, inoculations and various examinations. In total they accounted for more trips to the doctor than either of the 2 leading disease categories, respiratory and circulatory disorders.

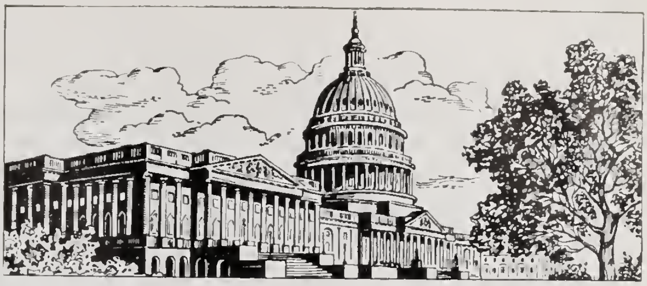
N.D.T.I. results point up a major role of the American physician in maintaining the good health of "well" patients. N.D.T.I. collected data from approximately 2,700 doctors during 1960. The study estimated a grand total of 972 million individual diagnoses were made by physicians for private patients in the United States last year.

Membership

The following applicants for membership were duly elected to membership by the Executive Board, April 24, 1961, in accord with Chapter II, Article VIII, of the Constitution and By-laws of the Society.

Active Members

Ross J. Clark, Freedmen's Hospital
Bernard Drabkin, 3636 16th Street, N.W.
Charles H. Epps, Jr., 1307 Jackson Street, N.E.
John D. Herman, Walter Reed General Hospital
Lydia B. Kronfeld, 3043 N Street, N.W.
Robert E. Lee, 3435 Benning Road, N.E.



NEWS & PERSONALS

General News

The Executive Board of the Medical Society of the District of Columbia met in regular session on April 24, 1961, with Chairman Watts presiding. As in the past, the Board authorized a payment of $100 each toward the expenses of delegates of the 3 local chapters of the Student American Medical Association in order to enable them to attend the Annual Convention of the SAMA in Chicago, May 3–7.

President Stubbs reported on the meeting of the Blue Shield Plans in Chicago, April 16–18. He mentioned specifically the adoption of what is called the Composite Professional Services Index to be used in connection with national accounts.

The Secretary, who also attended the Blue Shield meeting, called attention to the participation of members of the D. C. Medical Society. Dr. Henry L. Darner was Chairman of the Reference Committee on Committee Reports and New Business and Dr. C. Willard Camalier, Jr., was a member of the Professional Services Committee which had developed the Composite Professional Services Index.

The Secretary reported to the Board that Dr. Stubbs' term of office as Chairman of the Board of Directors of the National Association of Blue Shield Plans expired at this meeting and he would not consent to reëlection. His decision was accepted with deep regret by the officials of the Blue Shield Plans.

A motion was made and carried that the Executive Board commend Dr. Stubbs for his outstanding service in the above-named post.

The Board voted that applicants for membership who have been elected to membership in the Society be required to attend a membership luncheon sometime during their probation year in order that they may become better acquainted with the activities of the Society.

The date of Wednesday, November 15, 1961, was selected for the Society's Annual Business Meeting, which is always held prior to the ANNUAL SCIENTIFIC ASSEMBLY.

In a letter directed to the Secretary from Mr. Richard A. Velz, Director of Public Relations, A. H. Robins Company, Inc., it was indicated that the Society select a recipient of the Robins Award for presentation at its annual meeting. The Robins Company is desirous of honoring physicians in the various states for outstanding community services. The Board agreed that Dr. Herbert S. Gates, Chairman of the Society's Traffic Committee, had rendered faithful service over a period of years and that this would recognize the importance of his contribution to highway safety. The award will be presented at the opening day luncheon of the ANNUAL SCIENTIFIC ASSEMBLY.

The proposal that Dr. Preston A. McLendon be selected for the Society's Certificate for Meritorious Services for 1961 met with unanimous approval. Dr. McLendon has served not only as President of the Society, member and Chairman of its Executive Board, but he has been very active as a leader in civic affairs. This award will be a feature of the opening day luncheon of the ASA.

The Board voted to approve in principle the program of the Medic Alert Foundation. This is a new foundation which is planning to maintain a central listing of all individuals with specific allergies or similar medical problems.

Following discussion on the matter of admitting podiatrists to Associate membership in the Society, the Board voted that podiatrists do not qualify under Chapter II, Article V, of the Society's Constitution and By-laws for Associate membership.

President Stubbs reported that he had appointed Dr. J. Keith Cromer, Chairman of the Society's Committee on Cancer Control, to the newly created Cancer Coördinating Advisory Committee to the Department of Public Health. This Committee will advise the Department with respect to the use of funds provided by the National Cancer Institute. The Board approved the President's appointment.

The Secretary notified the Board that Dr. George E. Schreiner had been selected to serve on the National Foundation's Health Scholarship Committee for the District of Columbia. His name had been submitted with two others.

The Board designated Dr. Jack Kleh to succeed himself as the Society's representative to the Health and Welfare Council's Delegates' Assembly and that Dr. Richard H. Todd likewise succeed himself as representative of the Society on the HWC Aging Conference group.

The 113th Tactical Hospital of the District of Columbia Air National Guard, located at Andrews Air Force Base, has 2 openings for physicians. Duties entail attendance at 2 Saturday drills per month and 2 weeks' summer encampment. The pay is good and depends upon qualifications. Fringe benefits such as insurance, pension, club privileges, air trips, attendance at service schools, etc., are excellent. For information call Dr. William H. Beard, Columbia 5-2122.

The Clinical Center of the National Institutes of Health has just published a new revision of **"Current Clinical Studies and Patient Referral Procedures."** The publication describes briefly the diagnostic requirements, purposes and methods of those studies expected to be most active during the current year.

Consideration for admission to the Clinical Center is restricted to individuals referred by their own physician and, on the basis of a summary provided by referral, judged by the appropriate NIH investigators to have a particular kind and stage of illness or other condition required in one or more clinical studies. Upon discharge a full report of Clinical Center findings on his patient is furnished to the referring physician.

Physicians desiring to receive a copy of the publication should write to Dr. Jack Masur, Director of the Clinical Center, NIH, Bethesda 14, Maryland.

The Section on Anesthesiology of the Medical Society of the District of Columbia and the D. C. Society of Anesthesiologists held a joint meeting, May 1, in the Medical Society's auditorium. The following officers were elected to serve both groups:

Dr. John Esau, *Chairman;* Dr. Clarence L. Hebert, *Vice Chairman;* and Dr. Ervin N. Chapman, *Secretary-Treasurer.*

The International Medical Club of Washington elected the following officers at a meeting on April 8 at the Mayflower Hotel:

Dr. Arthur A. Morris, *President;* Dr. Donald Stubbs, *First Vice President;* Dr. Edgar Copeland, *Second Vice President;* Dr. Harry Lee Claud, *Third Vice President;* Dr. Robert Choisser, *Secretary;* Dr. Oscar B. Hunter, *Treasurer;* and Dr. A. B. Bennett, *Historian.*

The District of Columbia Tuberculosis Association and District of Columbia Trudeau Society held a joint annual meeting on May 1 at the National Press Club. Dr. Joseph W. Peabody, Jr., was reelected for a 3-year term on the Board of Directors of the Tuberculosis Association.

New officers for the Trudeau Society, elected at this meeting, are:

Dr. Moe Weiss, *President-elect;* Dr. Joseph H. Matthews, *Vice President;* and Dr. William J. Washington, *Secretary-Treasurer.*

Dr. Milton Gusack is the newly installed President of the Trudeau Society.

The Subspecialty Board of Allergy of the American Board of Pediatrics held annual examinations at Children's Hospital, April 6 and 7. Of the 16 successful candidates, 4 had studied at Children's Hospital under its pediatric allergy training program. They were Drs. Geraldine Freeman, Ali Riza Sarioglu, Stanley I. Wolf, and Herman Pinkerton, Jr. Dr. Wolf is an Associate member of the D.C. Medical Society.

The pediatric allergy training program is sup-

MR. RIDGWAY
MRS. WILLIAMS
MR. SPENCER
MR. CARPENTER
MR. SIGMON

PANEL APPEARING ON PROGRAM FOR DOCTORS' OFFICE STAFFS

Standing is MR. GEORGE B. MCGOVERN, Executive Vice President of Medical Service of the District of Columbia, who was moderator for a panel presentation on "Treating the Paperwork Plague," held in the District Medical Society's auditorium, May 4, under the sponsorship of its Committee on Public Information and Education. Dr. Paul R. Wilner, Chairman of the Committee, was on hand to welcome those in attendance, who filled the auditorium.

Seated, left to right, are the speakers, who stayed on late to answer numerous questions: MR. ALAN F. RIDGWAY, Manager, Federal Employee, Program Claims Department; MRS. LORENE WILLIAMS, Supervisor, Major Medical Claims Department; MR. JAMES A. SPENCER, Assistant Manager, Claims Department; MR. ARTHUR B. CARPENTER, Manager, Claims Department; AND MRS. BERNICE SIGMON, Supervisor, Claims Service and Eligibility, all of Group Hospitalization, Inc., which administers the Blue Shield Plan in Washington.

ported by the Borden Company, Mead Johnson Company, and the Gerber Products Company. At the present time there are only 120 certified pediatric allergists and only 25 certified full-time pediatric allergy training programs in the United States and Canada.

Dr. Richard H. Todd is Director of the Allergy Training Program at Children's Hospital in Washington.

The American College of Obstetricians and Gynecologists held its Tenth Anniversary Meeting, April 20–28, at Bal Harbour, Florida. Dr. Nicholson J. Eastman, of Baltimore, took office as President.

Newly elected officers for the D. C. Section of District IV are: Dr. Philip P. Steptoe, Chairman, and Dr. James A. Dusbabek, Vice Chairman.

The next meeting of District IV, which is chairmanned by Dr. Robert H. Barter, will be held in Atlanta, Georgia, September 28–30.

Inducted into the College during the recent meeting were 473 new Fellows, including Drs. William F. Colliton, Jr., Cyril L. Crocker and Rufus M. Roll, all Active members of the D. C. Medical Society; also, Dr. William Tenenblatt, an Affiliate member, and Dr. Avron H. Maser, of Bethesda, Maryland, an Associate member.

The George Washington University Hospital announces the opening of a clinic for the diagnosis and management of myasthenia gravis. The clinic is located at the Hospital's Dispensary, 23rd and Pennsylvania Avenue, N.W. Appointments may be made by calling Federal 3-9000, Extension 527.

Brig. General Clinton S. Lyter, M.C., U.S.A., has been appointed **new Commanding General of the Walter Reed Army Medical Center.** For the past 8 months he has headed the Walter Reed General Hospital, a component of the Center. He succeeds Major General C. F. St. John, who retired from active duty on April 30 to accept a position as Vice President of the University of Cincinnati and Director of the University's medical center.

General Lyter came to Washington from El Paso, Texas, where he had headed the Beaumont General Hospital for almost 2 years. A native of Kansas, he received his degree in medicine from the University of Kansas in 1929. He is a member of the American Medical Association, a Fellow of the American College of Surgeons, and a diplomate of the American Board of Surgery.

Dr. Janet G. Travell, Personal Physician to President Kennedy, was named "Woman of the Year" by the Women's Medical Society of New York State at its 55th Annual Meeting, May 7. Dr. Travell was cited for her accomplishments in medicine and for furthering women's position in the field.

Mr. Frank R. Jelleff, founder of the stores bearing his name and a leading civic and philanthropic figure, died at Doctors Hospital, April 27, 1961.

Mr. Jelleff was born in Cincinnati on September 23, 1878, and came to Washington in 1910. His civic interests are too many to enumerate, but he was probably proudest of his part in organizing the first Boys Club of Washington. He served as President of that organization from 1920 to 1940, later serving as President Emeritus. He was a member of the District Parole Board from 1938 to 1946, and headed the Community Chest of Washington, later the United Community Services, in various years. At the time of his death he was a member of the Board of Group Hospitalization, Inc., having served as an appointee of the Medical Society of the District of Columbia for many years and only recently reappointed.

During his long life, Mr. Jelleff received many awards and honors for his distinguished services. Only last year 800 of his friends gathered at the Shoreham Hotel for a testimonial dinner which marked 50 years as a successful merchant and outstanding citizen.

Personals

Dr. Maurice A. Selinger and the late Dr. John Minor were chosen to receive the traditional Gold-headed Cane Awards at the Annual Dinner of the Medical Staff of the Washington Hospital Center, held at the Hotel Statler-Hilton, April 27. Dr. Herbert H. Schoenfeld, Chairman of the Awards Committee, presented the canes to Dr. Selinger and to Dr. Charles L. Minor, of Philadelphia, who accepted for his father. The canes are awarded for outstanding service to the Hospital; both physicians have served as members of the consulting staff in internal medicine. For 10 years, 1946 to 1956, Dr. Minor was Chief of Medical Service at Emergency, which merged into the Center in the latter year.

AWARDS TO HOSPITAL CENTER DOCTORS

Examining the Gold-headed Canes awarded them by DR. HERBERT H. SCHOENFELD (left), Chairman of the Awards Committee of the Washington Hospital Center, are DR. MAURICE A. SELINGER (center) AND DR. CHARLES L. MINOR, of Philadelphia, who accepted the award for his father, the late Dr. John Minor.

Three members of the resident staff received cash awards for prize-winning papers. They were Drs. Fares John, Reuben Torti and Louis F. Warrick.

Dr. Herbert P. Ramsey has been appointed Chairman of the American Medical Association's Committee on Blood. The appointment was made by the AMA's Board of Trustees at its regular meeting in April.

Dr. George E. Schreiner was elected President-elect of the American Federation for Clinical Research at its annual meeting in Atlantic City, N. J., April 30. Dr. Schreiner is Associate Professor of Medicine of Georgetown University School of Medicine and Director of the Renal and Electrolyte Division. The Federation, with a membership of 3,800, is the largest organization for young clinical investigators in the United States.

During the recent meeting of the Society for Clinical Investigation, also held in Atlantic City, Dr. Schreiner was appointed to the Editorial Board of the *American Journal of Medicine*. Known as the "Green Journal," it is the largest independent medical journal in the United States.

Dr. Kenneth R. Nelson retired, May 1, as Chief Medical Officer of the U. S. Coast Guard and has accepted the position of Commissioner of Hospitals for the city of St. Louis, Missouri. He has been succeeded by Dr. Howard D. Fishburn, a career officer of the Public Health Service.

Dr. Howard T. Karsner, an Associate member of the Medical Society, received the Captain Robert Dexter Conrad Award for outstanding achievement in research and development for the Navy, at a banquet in Annapolis, Md., April 18. The occasion was the highlight of a 3-day scientific symposium sponsored by the Office of Naval Research. Dr. Karsner, medical research advisor to the Surgeon General of the Navy since 1949, has made major contributions to research programs in submarine and aviation medicine and has established clinical research facilities in the United States and overseas.

Dr. Harold M. Hobart was appointed by the Board of Trustees of the American Medical Association, at its April meeting, to membership on the Joint Committee on Health Problems in Education of the AMA and the National Education Association for a term of 5 years.

Dr. Andrew A. Marchetti was elected Director of the American Board of Obstetrics and Gynecology at a meeting of the Board in Chicago on April 14. Dr. Marchetti is Professor and head of the Department of Obstetrics and Gynecology at Georgetown University School of Medicine.

Dr. Henry Amiss Hornthal was elected President of the Greater Washington Area Alumni Association of the Medical College of Virginia at its annual meeting, April 18, at the Marriott Motel.

Dr. W. Montague Cobb, Professor and head of the Department of Anatomy at Howard University College of Medicine, was one of 6 Howard University graduates who were honored for outstanding achievement by the Howard Alumni Club of Washington, April 23, at a banquet in the Terrace Room of Arlington Towers.

Dr. Richard M. Rosenberg retired, May 13, as Deputy District Coroner for the District of Columbia after serving in that post for 26 years. A graduate of Georgetown University School of Medicine, Dr Rosenberg early developed the interest in criminology which led to his appointment as Deputy Coroner in 1934. He is credited with aiding in the solution of some of the District's most difficult criminal cases. He will devote full time to private practice at 1332 Eye Street, N.W.

Major General Howard McC. Snyder, formerly Personal Physician to President Eisenhower, was awarded the Legion of Merit at recent ceremonies in the office of the Surgeon General. He is an Honorary member of the D. C. Medical Society.

Eight Active members of the D.C. Medical Society were among the doctors recently examined and certified, April 15, in the specialty of obstetrics and gynecology by the American Board of Obstetrics and Gynecology. They are: **Drs. William F. Colliton, Jr., Pasquale De Felice, Ernest W. Lowe, Earl D. Neslen, Irvin W. Robner, Melvin W. Sandmeyer, Jr., George E. Stevens, and Charles E. Townsend.**

Dr. John G. Ball, of Bethesda, an Associate member of the D. C. Medical Society, is the newly elected

Vice President of the Medical and Chirurgical Faculty of Maryland.

Two other Associate members of the Medical Society were also elected to office at the April meeting of the Faculty: **Dr. William B. Hagan**, of Mount Rainier, alternate delegate to the American Medical Association, **and Dr. Waldo B. Moyers**, of Hyattsville, Vice Chairman of the Council.

Four Washington area physicians have been elected Fellows of the American Academy of Pediatrics. Two of them are members of the D. C. Medical Society, **Dr. Walter A. Combs and Dr. Harold M. Hobart.**

Dr. William T. Gibb and Dr. Austin B. Rohrbaugh, Jr., have been reëlected to the Board of Trustees of the Suburban Hospital Association. Dr. Rohrbaugh is an Associate member of the Society.

Dr. Dorothy S. Jaeger-Lee, a practicing pediatrician in Washington and vicinity for many years before she moved to Atlanta, Ga., writes the Secretary of the Medical Society that she is returning to private practice in Atlanta, with offices at 3162 Piedmont Road, N.E.

Dr. Jaeger-Lee is on the staff of the Maternal and Child Health Division of the Georgia Department of Public Health as consultant in pediatrics and Director of the Nutrition Section. She is also Instructor in Pediatrics at Emory University School of Medicine.

Books Received

Acknowledgment is made of the following books which have recently been received. Selections will be made for more extensive reviews in the interest of our readers and as space permits. Physicians are urged to submit reviews of additional books which, in their opinion, merit comment.

Pharmacology: The Nature, Action and Use of Drugs, 2nd ed. Harry Beckman, M.D., Chairman, Departments of Pharmacology, Marquette University Schools of Medicine and Dentistry; Consulting Physician, Milwaukee County General Hospital and Columbia Hospital; Editor, Year Book of Drug Therapy. Price, $15.50. Pp. 805 (illustrated). Philadelphia: Saunders, 1961.

Current Therapy—1961: Latest Approved Methods of Treatment for the Practicing Physician. Edited by Howard F. Conn, M.D.; Consulting Editors: George E. Burch, M. Edward Davis, Vincent J. Derbes, Garfield G. Duncan, Hugh J. Jewett, Clarence S. Livingood, Perrin H. Long, H. Houston Merritt, Walter L. Palmer, Hobart A. Reimann, Ralph Wayne Rundles, and Robert H. Williams. Price, $12.50. Pp. 806. Philadelphia: Saunders, 1961.

New and Nonofficial Drugs—An Annual compilation of available information on drugs, including their therapeutic, prophylactic and diagnostic status, as evaluated by the Council on Drugs of the American Medical Association. Pp. 849. Philadelphia: Lippincott, 1961.

Information, Please! For Women Only, incorporating The Dunhill Chart. Alfred Dreyfus II. Price, $7.50. Pp. 556. New York: Vantage Press, 1961.

The Hand—A Manual and Atlas for the General Surgeon. Henry C. Marble, M.D., F.A.C.S., Consulting Surgeon to the Massachusetts General Hospital. Price, $7.00. Pp. 207. Illustrations by Mildred Codding. Philadelphia: Saunders, 1960.

Obituaries

JOHN MINOR, A.B., M.D., F.A.C.P.
(1893–1961)

On April 8, 1961, the prominent Washington internist, Dr. John Minor, died in George Washington University Hospital after a brief illness at the age of 67.

A graduate of Harvard Medical School, Dr. Minor began practice in the District of Columbia in 1922, after postgraduate training at St. Luke's and Presbyterian Hospitals in New York City.

JOHN MINOR, A.B., M.D., F.A.C.P.

(1893–1961)

In the years that followed he became one of Washington's outstanding physicians in the field of internal medicine. He was certified by the American Board of Internal Medicine and, later, as a member of this Board, lent his considerable efforts and time to the conduct of examinations and certifications.

During World War II he left practice for service as a Colonel with the Army Medical Corps. In 1944–45 he was medical consultant to the Third Service Command which covered Maryland, Virginia and Pennsylvania. In 1946 he was recipient of the Legion of Merit.

To teaching and training in medicine he brought a wide knowledge. He served as consultant to the old Episcopal Hospital and the Home for Incurables; as Associate in Medicine at George Washington University School of Medicine; and as a teaching consultant at Walter Reed General Hospital. In the early 1950's he was Chief of the Medical Service at the old Emergency Hospital. He was a member of the Committee on Medicine of the Division of Medical Sciences of the National Research Council.

Among the national professional organizations of which he was a member are the American College of Physicians, American Heart Association, American Clinical and Climatological Association, and Society of Consultants of World War II. He was President of the two latter in 1950 and 1952, respectively. His membership in several local medical societies included the Clinicopathological Society and the Osler Society. His several roles in the Medical Society of the District of Columbia included that of President in 1948–1949.

Dr. Minor was born on October 25, 1893 in Washington. He was educated in Virginia, graduating from Episcopal High School, Alexandria, in 1912. From the University of Virginia and Harvard Medical School came his baccalaureate and medical degrees.

He leaves his wife, the former Mrs. Maria Williams Sheerin. Dr. Minor's first wife, the former Mildred Truslow, died in 1946. He is survived by three sons: Dr. Charles L. Minor, of Philadelphia; John T. Minor, of Grand Rapids, Michigan; and Edward T. Minor, of Houston, Texas. He also leaves three stepchildren: the Reverend Charles Sheerin, of Williamsburg, Virginia; Mrs. James Harrison, of Hopewell, Virginia; and Miss Elizabeth Sheerin, of Washington.

John Minor was one of the few "undistracted" persons in the world and at the same time one most happily engaged in the challenging minutiae of life and people. To his colleagues he gave his always friendly counsel and steadfast loyalty. To the sick he came as a gentle father. All who knew him have felt his delicate courtesy of speech and manner. Unhurried and sober he seemed, even sometimes solemn. But it was always in a way that gave a secret sign of his incomparable warmth and understanding.

John Minor had other special qualities, and many honors came to him because of some of them. Yet for all of these honors he possessed few of the attributes of a popular leader. Indeed, he needed few, or none. His humanity was enough.

Louis A. Craig, Jr., M.D.

WALLACE NEVIN MOOK, B.S., M.D.

(1910–1961)

Dr. Wallace N. Mook, a general practitioner in Takoma Park, Maryland, since 1937, died April 13, 1961, at his home, 10306 Naglee Road, Silver Spring, Maryland. He was an Associate member of the D.C. Medical Society.

Dr. Mook was born in Ambridge, Pa., September 10, 1910, to the late Edward D. Mook and Edna L. Mook. His mother, who survives him, lives in Mt. Vernon, Ohio.

Dr. Mook was educated in the public and parochial schools of Erie, Pa., and graduated in science from the Washington Missionary College of Takoma Park, Md., in 1934. He received his degree in medicine from the College of Medical Evangelists, Loma Linda, California, in 1936 and interned at the North Hudson Hospital, Weehawken, New Jersey, for a year.

Dr. Mook maintained offices at 7701 Carroll Avenue, Takoma Park. He had been on the staff of the Washington Sanitarium since 1938, and had served as a member of the Board of Prince Georges Medical Center in Hyattsville since 1947.

He was a member of the Montgomery County Medical Society, the American Medical Association, the Southern Medical Association, and the Interstate Postgraduate Medical Association. An active church member, he was a member of the Board of

Elders of the Sligo Seventh-day Adventist Church in Takoma Park.

He leaves his wife, Mrs. Helen Joyce Mook; two daughters, Mrs. Bonnie Joanne Miller, of Takoma Park, and Miss Patricia Mook, residing at home; and a son, Wallace N. Mook, Jr., a student at Shenandoah Valley Academy, New Market, Va. He also leaves two sisters, Mrs. Thelma Mahoney, of Jamestown, New York, and Mrs. Muriel Wessely, of Mt. Vernon, Ohio.

Use of Antihistamines with Steroids in Skin Disorders—Fields

(Continued from page 316)

cess of that to be expected from many other commonly used therapeutic agents.

The therapeutic effects were observed in 45 patients with the first combination and in 30 patients with the second.

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Listeria Meningitis in Newborn—Delta, Scott and Booker

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Primary Amyloidosis of Heart—Johnson et al

(Continued from page 341)

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Macroglobulinemia and Amyloid Nephrosis—Cassner, Bittar and Parrish

(Continued from page 343)

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Primary Carcinoma of Fallopian Tube—Kamnuankija and Beaven

(*Continued from page 346*)

tumor.[12] An occasional preoperative diagnosis may then be possible.

Salpingography[13] has been recommended as a useful diagnostic test, but the danger of dissemination of cancer cells in the peritoneal cavity is a possible risk.

Summary

A case of primary carcinoma of the fallopian tube has been presented, the only case ever recorded at Doctors Hospital from over 200,000 general admissions, or from 20,500 gynecologic admissions in the past 20 years. Previously described features of this disease relative to its preoperative diagnosis have been presented. Because of the extreme rarity of this disease, as well as the difficulties encountered in making a preoperative diagnosis, further published case reports might be of value.

Addendum: Since the writing of this paper the patient was readmitted to Doctors Hospital on March 18, 1961 with definite evidence of generalized metastases.

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ANNUAL FINANCIAL STATEMENTS

THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA
BALANCE SHEET

December 31, 1960

ASSETS

Cash:		
General Fund	$62,945.32	
Building Fund	6,061.17	
Davidson Lecture Fund	285.30	
Bequest Fund	13,425.89	
Kober Library Fund	4,968.56	
Frank M. McChesney Fund	512.57	
Sterling Ruffin Bequest Fund	14,402.67	$102,601.48
Accounts Receivable		16,092.35
Securities		18,412.98
Fixed Assets—Net after Depreciation (Land, Buildings—1718 & 1710 M St., N.W., Furniture & Fixtures)		228,735.78
Other Assets (Grant to Cancer Program)		3,735.19
TOTAL ASSETS		$369,577.78

LIABILITIES AND NET WORTH

Accounts Payable (Trade Creditors)	$ 5,433.39
Collections for Trust and Other Funds (AMA Dues 1961)	6,213.62
Other Liabilities (Grants and Taxes)	2,152.63
Deferred Income (Society Dues 1961)	43,007.25
TOTAL LIABILITIES AND DEFERRED INCOME	$ 56,806.89
Net Worth	312,770.89
TOTAL LIABILITIES AND NET WORTH	$369,577.78

STATEMENT OF INCOME AND EXPENSES

Year Ended December 31, 1960

INCOME:			
Membership Dues		$ 99,402.50	
Other Income:			
Medical Annals		62,726.81	
Medical Bureau		110,970.60	
Annual Scientific Assembly (net)		668.87	
Rental Income 1710 M St., N.W.		7,401.75	
Miscellaneous		1,935.58	
TOTAL INCOME			$283,106.11
EXPENSES:			
Maintenance of Building		$ 6,766.43	
Maintenance of Office:			
Staff Salaries	$48,271.75		
Operating Expenses	14,217.70	62,489.45	
Society General and Special Expenses		12,746.39	
Expenses of Property—1710 M St., N.W.		8,125.72	
Medical Annals:			
Salaries	$12,436.00		
Operating Expenses	47,937.23	60,373.23	

(*Continued on next page*)

STATEMENT OF INCOME AND EXPENSES

(Continued)

Medical Bureau:			
Salaries	$84,804.02		
Operating Expenses	26,872.90	111,676.92	
TOTAL EXPENSES EXCLUSIVE OF DEPRECIATION			$262,178.14
Excess of Income over Expenses before Depreciation			$20,927.97
Deduct: Depreciation and Transfers			(8,983.91)
NET INCREASE IN NET WORTH			$ 11,944.06

ESTIMATED BUDGET 1961*

INCOME:			
Membership Dues		$104,010.00	
Other Income:			
Medical Annals		70,300.00	
Medical Bureau		119,110.00	
Rental Income—1710 M St., N.W.		6,924.00	
Miscellaneous		500.00	
TOTAL INCOME			$300,844.00
EXPENSES:			
Maintenance of Building		$ 6,750.00	
Maintenance of Office:			
Staff Salaries	$55,250.00		
Operating Expenses	14,000.00	69,250.00	
Society General and Special Expenses		12,550.00	
Expenses of Property—1710 M St., N.W.		6,443.02	
Medical Annals:			
Salaries	$12,796.00		
Operating Expenses	51,274.00	64,070.00	
Medical Bureau:			
Salaries	$82,000.00		
Operating Expenses	28,674.00	110,674.00	
TOTAL EXPENSES			$269,737.02
Excess of Income over Expenses			31,106.98
Transfer to Building and Equipment Funds			(3,000.00)
NET EXCESS OF INCOME OVER EXPENSES			$28,106.98

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* Adopted at the Annual Business Meeting of the Medical Society of the District of Columbia, November 16, 1960.

bacterial
cheobronchitis

analba*
romptly
gain precious
erapeutic hours

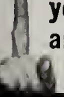
In the presence of bacterial infection, taking a culture to determin bacterial identity and sensitivity is desirable—but not always practical in terms of the time and facilities available.

A rational clinical alternative is to launch therapy at once with Panalba, the antibiotic that provides the best odds for success.

Panalba is effective (in vitro) against 30 common pathogens, including the ubiquitous staph. Use of Panalba *from the outset* (even pending laboratory results) can gain precious hours of effective antibioti treatment.

Supplied: Capsules, each containing Panmycin* Phosphate (tetracycline phosphate complex), equivalent to 250 mg. tetracycline hydrochloride, and 125 mg. Albamycin,* as novobiocin sodium, in bottles of 16 and 100.
Usual Adult Dosage: 1 or 2 capsules 3 or 4 times a day.
Side Effects: Panmycin Phosphate has a very low order of toxicity comparable to that of the other tetracyclines and is well tolerated clinically. Side reactions to therapeutic use in patients are infrequent and consist principally of mild nausea and abdominal cramps.
Albamycin also has a relatively low order of toxicity. In a certain few patients, a yellow pigment has been found in the plasma. This pigment, apparently, a metabolic by-product of the drug, is not necessarily associated with abnormal liver function tests or liver enlargement.
Urticaria and maculopapular dermatitis, a few cases of leukopenia and agranulocytosis have been reported in patient treated with Albamycin. Most of these side effects usuall disappear upon discontinuance of the drug.
Caution: Since the use of any antibiotic may result in over growth of nonsusceptible organisms, constant observation o the patient is essential. If new infections appear during therapy, appropriate measures should be taken.
Total and differential blood counts should be made routinel during prolonged administration of Albamycin. The possibilit of liver damage should be considered if a yellow pigment, metabolic by-product of Albamycin, appears in the plasma Panalba should be discontinued if allergic reactions that ar not readily controlled by antihistaminic agents develop.

lba



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BOOK REVIEWS

Pharmacology: The Nature, Action and Use of Drugs, 2nd ed. HARRY BECKMAN, M.D. Price, $15.50. Pp. 805 (illustrated). Philadelphia: Saunders, 1961.

This is a considerably revised second edition of a pharmacology text, which, as Dr. Beckman states in the preface, is designed for the undergraduate medical student. As such, it succeeds admirably. The material is well presented in a highly readable, almost colloquial manner. The type is large, in contrast to certain of the more comprehensive texts, with clear demarcation of the various sections and drugs. The author has also made extensive use of graphs, tables and charts, comparing properties of the drugs, all of whicn are of great value to the busy student. Moreover, the overall presentation is relatively brief, with a minimum of controversial material, notably about the more obscure aspects of nature of action of drugs. As a result the medical student should be left with a rather clear impression of those properties of drugs of greatest importance in his clinical practice, although as a reference for the graduate student, pharmacologist or research-minded clinician, its brevity and minimum of documentation would be of less value.

The reviewer is much impressed by the more clinical approach employed by the author in contrast to other texts. There is also a rather practical approach to pharmacology, such as the relative costs of prolonged therapy with different drugs, which should be a worthy consideration for the student.

A comparison of the present edition with the first reveals a number of important changes. Those chapters on drugs affecting mood and behavior, diuresis, histamine reactions, cancer, diabetes and infectious diseases have all been enlarged considerably due to the very active advances in these fields recently. The chapter upon drug toxicity has also been expanded; the reviewer has often heard the medical student deplore the minimum of toxicology to which he has been exposed. New chapters include those on testing of drugs, and on arteriosclerosis, but of more importance, perhaps, are 2 brief chapters dealing with the naming of drugs and legal control of new drugs.

The new edition eliminates the chapters dealing with diagnostic aids and with radioisotopes, other than radioiodine. Admitting that these compounds may be discussed in other courses, the reviewer still feels that such substances have extremely interesting biochemical and pharmacologic properties and might well have been included. Other than this minor objection it is my belief that this text has met its aims very well and will continue to fill a useful function in the teaching of pharmacology.

CLARKE DAVISON, PH.D.

Beloved Professor: The Life and Times of William Dodge Frost. RUSSELL E. FROST. Price, $3.75. Pp. 350, illustrated by photographs. New York: Vantage Press, 1961.

"Beloved Professor" is a very interesting short biography of a famous University of Wisconsin bacteriologist by a devoted son. The author tells in a very interesting manner how his father inspired generations of students, the contributions he made to the field of bacteriology, and his crusade in the fight against tuberculosis. His pioneering in the field of public health was not only for the benefit of human beings but also for the elimination of tuberculosis among dairy cattle. Dr. Frost for nearly half a century was an outstanding figure in the field of bacteriology and contributed much in this field. In fact, Dr. Selman A. Waksman, the discoverer ot streptomycin, gives him much credit for laying the foundation which led to the "orientation of a new field of science, that of antibiotics."

He was a friend of the outstanding scientific investigators of the latter part of the nineteenth century and the first portion of the twentieth century, among whom were Robert Koch, who isolated the tubercle bacillus, Dr. Edward Trudeau, Sir William Osler, and Dr. William H. Welch. His associations with these pioneers are interestingly recorded by the author.

It is estimated that Dr. Frost, in fighting tuberculosis through his long and dedicated career, taught some 5,000 students to become specialists in bacteriology and invented such boons to bacteriologic study as the Frost Little-Plate method and the Frost Gasometer. During his University career he initiated and helped build a tuberculosis sanatorium to serve his community. During his later years he actually became director of the sanatorium.

From the pages of this inspiring story the author truly reveals the devotion of a son for his father from firsthand information. Dr. Frost must have been a delightful and beloved professor, with varied interests ranging from tinkering with antique clocks to developing a new variety of iris. With all his various activities he remained an active churchman, a teacher who rejoiced in the achievements of his students, and a man devoted to his family and friends.

Anyone interesting in American medical history would enjoy this volume.

JOHN R. PATE, M.D.

Clinical Cardiopulmonary Physiology, 2nd ed., revised and enlarged. Sponsored by the American College of Chest Physicians. Editorial Board: BURGESS L. GORDON, M.D., *Editor-in-Chief;* ROSS C. KORY, M.D., *Associate Editor;* ALBERT H. ANDREWS, JR., M.D.,

(*Continued on page 24*)

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Book Reviews

(*Continued from page 22*)

JOHN F. BRIGGS, M.D., BENJAMIN M. GASUL, M.D., EDWIN R. LEVINE, M.D., AND JOHN J. SAMPSON, M.D. Price, $28.50. Pp. 1013, with 728 illustrations. New York: Grune & Stratton, 1960.

This book is an aggregate of works from clinics and centers throughout the United States and from selected foreign clinics. Each of the 12 sections deals with a consideration of particular problems. For example, in the Section on Evaluation of Pulmonary Physiology there are excellent articles on the physiology of the lung, the diagnostic tests used, how these tests were arrived at, and the mathematical and technical considerations in determining them. There are also sections devoted to resuscitation of a patient during an emergency with excellent photographs and descriptions. The relatively new field of cineangiocardiography is discussed and also demonstrated with some beautiful sequential films. The entire chapter on the Roentgen Physiology of the Cardiovascular System by Dr. Steinberg should be read by everyone interested in this topic, especially the practitioner who does not have time to consult all the available literature.

Here, then, in one large but concise and well edited text is a wonderful reference book for the entire medical profession.

JOHN M. KESHISHIAN, M.D.

The Thyroid-Vitamin Approach to Cholesterol Atheromatosis and Chronic Diease: A Ten-year Study, a Monograph. MURRAY ISRAEL, M.D. Paper. Pp. 132. New York: George Press, 1960.

This book by Dr. Murray Israel is a monograph of clinical observations which the author has made over a 10-year period by treating patients with cholesterol atheromatosis and chronic disease. He reports in particular on 714 patients and obtained clinical improvement in a remarkably high percentage of patients. The methods that he describes are very simple and can be carried out in any clinical situation without much laboratory work. No control studies were done, and, therefore, the observations lack any scientific value.

It is my opinion, as the reviewer of this work, that these results could not be reproduced unless the physician carrying out the work was a dynamic and enthusiastic supporter for the technics.

HARRY A. HORSTMAN, JR., M.D.

Childbirth with Hypnosis. WILLIAM S. KROGER, M.D. Edited by JULES STEINBERG. Price, $3.95. Pp. 216. Garden City, N. Y.: Doubleday, 1961.

This book is intended for expectant mothers and it will, no doubt, be widely read by them. Obstetricians will certainly be questioned about it by some of their patients.

The author is known both as an obstetrician and hypnotist. He points out that one of the biggest differences between the Read method of "natural childbirth" and childbirth aided by hypnosis is that the former is concerned primarily with the conscious fears and tensions of the pregnant woman, while the latter is concerned with "unconscious" anxieties and hidden fears leading to painful sensations. Hypnosis may prevent the emergence of the latter into consciousness.

Dr. Kroger also emphasizes that although hypnosis is not necessarily a substitute for conventional analgesia and anesthesia, he believes that hypnotic suggestion can effectively reduce the amount of drugs required during labor. Whether or not one accepts this opinion, it can hardly be denied that these are desirable goals for eutocia.

GEORGE D. WEICKHARDT, M.D.

The Hand—A Manual and Atlas for the General Surgeon. HENRY C. MARBLE, M.D., F.A.C.S. Price, $7.00. Pp. 207. Illustrations by Mildred Codding. Philadelphia: Saunders, 1960.

Dr. Marble in 8 chapters and 197 pages covers the problems related to the hand, including the commonplace traumatic injuries, the next most common lesion, the acute infections, and then the rare chronic infections and the rarer tumors of the hand.

The information presented stems largely from the experiences obtained at the Massachusetts General Hospital. Technics presented are largely his and his associates, developed by their experiences and influenced by their teachers.

He presents the fundamental anatomic and physiologic elements in an extremely comprehensive manner and complements these with numerous line drawings well labeled.

He takes nothing for granted, as evidenced by a chapter devoted to history-taking and examination of the patient; in other chapters are detailed methods of obtaining local or regional anesthesia for operative procedures, operating room setups, methods of irrigation of wounds, even instruments used in operations, technics of suturing and splinting.

Dr. Marble emphasizes, in the preface of his book, the importance of proper treatment rendered to the hand on the day it is injured, which to a large extent determines the future usefulness of that hand. This manual is definitely recommended to the general surgeon.

ERMAN W. EDGECOMBE, M.D

(*Continued on page 36*)

MEDICAL ANNALS
of the District of Columbia

July 1961 VOLUME XXX • NUMBER 7

Retained or Residual Stones in the Common Bile Duct

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STONE IN THE COMMON BILE DUCT is found in approximately 10 to 20 per cent[1, 2] of patients operated upon for cholelithiasis. Often these stones form in the gallbladder and pass through the cystic duct to the common duct; they may, however, form in the main biliary duct or even intrahepatically. Common duct stone is more apt to be present in patients with long-standing cholelithiasis; this is one of several good reasons for recommending elective cholecystectomy for patients with symptomatic or asymptomatic cholelithiasis, particularly if they are safe risks for surgery.

The diagnosis of choledocholithiasis may be so easy as to be made on history alone, or so difficult as to require exploratory laparotomy for resolution. Likewise, common-duct surgery may be relatively easy or quite difficult depending on the many variables which may be encountered. It is to be expected, therefore, that the results of common-duct exploration, while usually excellent, may at times be disappointing. An important cause of operative failure is the persistence of overlooked or residual stone (or stones) in the biliary tract after common-duct exploration.

The following case of residual intrahepatic stones serves to illustrate some of the problems encountered in this type of surgery.

ILLUSTRATIVE CASE

A 50-year-old Chinaman was admitted to the medical service of Georgetown University Hospital with the chief complaint of acute right upper quadrant pain associated with nausea and vomiting. The pain radiated around to the back and beneath the right scapula. The patient denied jaundice but said that his urine had become darker with the onset of symptoms.

A cholecystostomy had been done 2 years previously in Formosa and a cholecystectomy and choledochotomy 3 months later for cholelithiasis and multiple common-duct stones.

The patient was in acute distress, bending and twisting in an effort to obtain relief from pain. There were right upper-quadrant tenderness and muscle spasm only. The white blood cell count was 14,500 cu. mm., the serum amylase 444 units, the icteric index 25, and the urine positive for bile.

A diagnosis of biliary colic due to residual common-duct stone and associated pancreatitis was made.

The symptoms subsided on conservative treatment. Subsequently the alkaline phosphatase was reported as 27.6 Bessey-Lowrey units. The serum bilirubin fell from a high of 11.9 mg. to 3.0 mg. over a 17-day period.

An intravenous cholangiogram failed to outline the biliary ducts on 2 occasions. A liver biopsy showed biliary stasis without hepatic parenchymal lesions.

The patient improved and was discharged from the medical service.

Three and one-half months later he was again admitted to the hospital with a similar attack and operated upon. A dilated common duct was found containing multiple stones. These were removed, the sphincter of Oddi dilated to 8 mm., and T-tube drainage of the common duct instituted. The postoperative course was uneventful, but a cholangiogram taken prior to discharge from the hospital revealed a single residual stone in the common duct.

A second operation was then done, the common duct being exposed with great difficulty through adhesions resulting from 3 previous operations. The dissection revealed a choledochoduodenal fistula (suspected preoperatively by X-ray examination). The stone was removed and a transduodenal sphincterotomy done. An operative cholangiogram confirmed that the extrahepatic ducts were free of stones. The patient recovered after a difficult postoperative course.

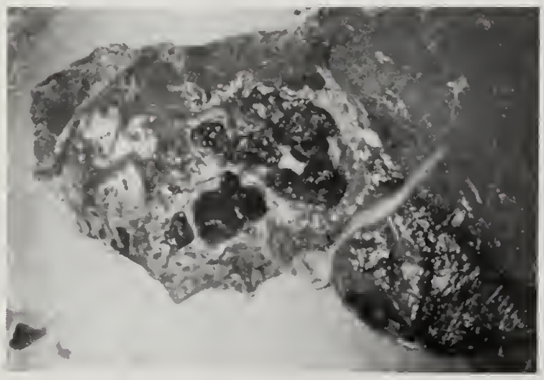

FIG. 1. Section through right lobe of liver—multiple hepatic stones.

Laboratory data obtained 3 months after removal of all stones from the ducts were as follows: total serum bilirubin 1.4 mg.; alkaline phosphatase 15.0 Bessey-Lowrey units; bromsulfalein 32 per cent retention; cephalin flocculation 24 hours, 2+, 48 hours, 3+; urine positive for bile intermittently; urine negative for urobilinogen intermittently.

Approximately 9 months later the patient began to complain of right upper quadrant discomfort, chills and fever. The initial impression was that this was an episode of intermittent cholangitis, but in spite of antibiotic therapy the symptoms progressed rapidly. The patient complained of increasingly severe high epigastric pain, shortness of breath, and generalized weakness. Examination revealed high epigastric tenderness and left pleural effusion. A diagnosis of subphrenic abscess was considered most likely and, because of the rapid deterioration of the patient's condition, surgical drainage was attempted in an otherwise extremely poor-risk patient. The operative findings consisted of a left subphrenic abscess which had ruptured through the left leaf of the diaphragm. There was a massive seropurulent pleural effusion. The patient did not survive the operative procedure. Section of the right lobe of the liver at autopsy revealed numerous intrahepatic gallstones (figures 1 and 2). However, the extrahepatic ducts were free of stones. There was also severe biliary cirrhosis.

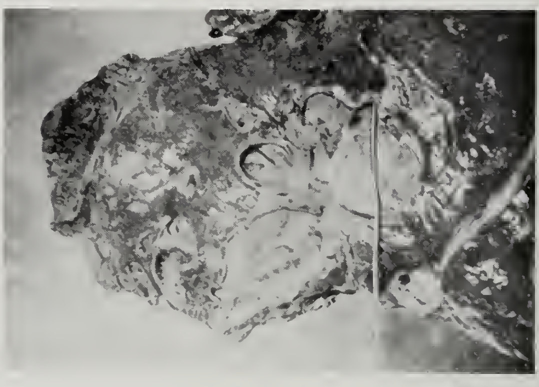

FIG. 2. Appearance of liver after removal of stones; probe in right hepatic duct.

COMMENT

This case demonstrates the problem of the residual common-duct stone and the value of operative cholangiography in helping to establish whether or not all stones have been removed from the extrahepatic biliary system. However, the retained intrahepatic stones were not suspected until the liver was sectioned at autopsy. Long-standing cholelithiasis and choledocholithiasis had been complicated by pancreatitis, biliary cirrhosis, septic cholangitis, subphrenic abscess, and the formation of intrahepatic stones. Removal of the gallbladder and of the stones from the common duct could not and did not prevent continuing intrahepatic destruction due, in part at least, to the residual intrahepatic stones. These stones were so large that they could not pass from the dilated intrahepatic ducts into the right hepatic duct.

DISCUSSION

The diagnosis of common-duct stone is important and once reasonably established demands surgical exploration of the ducts. However, common-duct exploration is not routinely done with cholecystectomy because it is not always necessary and the additional procedure may increase the operative morbidity and mortality. Mixter and his associates[3] in reporting on 1,626 cases of cholecystic disease found a fatality rate of 0.7 per cent for cholecystectomy and 3.9 per cent for cholecystectomy plus choledochotomy. Lahey,[4] Cole,[5] and Walters[6] have each reported increased fatality rates with duct exploration. Others have not found an appreciable difference.[7, 8] The discrepancy in these reports probably lies in the degree of illness present in groups of patients undergoing duct exploration. It is unlikely that common-duct exploration will add appreciably to the fatality rate in good-risk patients without significant common-duct disease or liver involvement. It probably will add somewhat to the morbidity. However, ductal exploration in an ill, elderly, jaundiced, febrile individual will almost certainly add to the operative risk. This does not preclude the desirability or necessity of such exploration even in very sick patients when it is indicated.

Indications for common duct-exploration. Any one of the following factors suggests the need to explore the common duct at the time of gallbladder surgery:

1. A history of jaundice or of chills and fever.
2. An elevated serum bilirubin.
3. The presence of sand or small stones in the gallbladder.
4. A thickened and contracted gallbladder.
5. Induration in the head of the pancreas.
6. A thickened and/or dilated common duct.
7. The presence of muddy bile in the common duct as determined by aspiration.
8. Enlargement, induration or cirrhosis of the liver.
9. Palpable stones in the common duct.

Nevertheless, even with these indications, duct exploration is negative in approximately 50 per cent of patients.[2, 3]

The normal common duct varies in size somewhat depending on the patient's size, the average diameter being 7 mm. Duct dilatation is an indication for exploration and, using this criterion, Sullens and Sexton[9] found common-duct stones in 60 per cent of their patients whose ducts measured more than 7 mm. in diameter. It is important to remember, however, that a duct may be dilated in the absence of stones, and it may be of normal size in the presence of stones. It has been noted often that stones may lie in the common duct without giving rise to either jaundice or colic.

Technical aspects. The technic of common-duct exploration is well standardized. A 2 cm. incision is made, beginning below at the upper margin of the first portion of the duodenum. This incision should be made sufficiently toward the midline in order to avoid opening into the cystic duct as it joins the common hepatic duct. Bile is allowed to flow freely from the opened common duct, and this may wash out stones. The distal duct is then explored with a soft rubber catheter and saline irrigation. This is followed by a spoon or malleable probe according to the operator's preference. A stone may be lodged in a diverticulum of the duct wall and be passed by the exploring probe as it enters the duodenum. Therefore, the probe must be used to palpate the mucosa of the duct as it is advanced. Most common-duct stones are found close to the ampulla of Vater. In attempting to pass a catheter or probe through the ampulla, either the stone or the sphincter of Oddi and papilla may be pushed ahead of the instrument and the duodenum not entered. It is important to definitely enter the duodenum with the exploring instrument, and if there is doubt about this, the duodenum should be opened in its second portion and the papilla inspected. If necessary, retrograde exploration of the common duct can be done. It is often helpful to kocherize the duodenum prior to transduodenal exploration of the ampulla of Vater.

The proximal common and the right and left hepatic ducts must also be carefully explored as outlined above. A no. 6 or 7 Bake's dilator should be passed through the ampulla before completing ductal exploration. Sphincterotomy is done depending on whether fibrosis is present or if needed for stone extraction.

Residual stones. Unfortunately, we cannot guarantee that all stones will be removed with duct exploration. Surgeons experienced in common-duct work have variously reported an incidence of from 2 to 24 per cent retained or overlooked stone following choledocholithotomy.[10, 11] Recurrent symptoms due to an overlooked stone might be expected by most surgeons in 6 to 10 per cent of patients in whom common-duct stone has previously been removed. The symptoms may appear in the immediate postoperative period or, according to Johnston, Waugh and Good,[1] as late as 22 months after surgery (average 7 months). The clinical features are essentially biliary colic, nausea, vomiting, chills and fever, acholic stools, and jaundice, in varying combinations. Often the culprit is a single stone less than 1.0 cm. in diameter.[1] It is true that stones may re-form in the common duct, but these are usually soft and mushy and do not cause symptoms until several years after surgery.

It is easier to overlook a stone in poor-risk patients, or when anesthesia is inadequate and operative exposure unsatisfactory. This is true also with obese patients. As stated above, stones may lie in crypts in the duct wall and be bypassed. Stones may also be forced up into the intrahepatic ducts during ductal exploration, or they may form there. These are both difficult to recognize and to remove and, of course, may be the source of recurrent stone postoperatively.

Hepatic stones. Norman[12] has reported hepatic-duct stones in 46 (24 per cent) of 195 patients in whom choledocholithotomy was performed. These were found by careful operative cholangiography. Stones were found in left and right hepatic ducts and their branches. After careful common-duct exploration, residual stones were present in 26 (56 per cent) of these 46 patients having hepatic stones, which emphasizes the difficulty that may be encountered in removing intrahepatic stones.

According to Norman, 2 main right hepatic ducts exist in most livers, in addition to the left hepatic duct. The more medial of the right hepatic ducts joins the main right hepatic duct or the junction of right and left hepatic ducts. This duct is directed posteriorly and drains the posterior inferior segment of the right lobe. This duct is very difficult to examine by means of probes, etc.

Cholangiographic visualization of the intrahepatic ducts requires several views and careful positioning. The detection of intrahepatic stones by this means may nevertheless be difficult; it may appear as a negative shadow, or the failure of filling of a hepatic duct may suggest its blockade by stone. However, the fact that smaller hepatic ducts do not fill with dye does not prove that stones are present.

Operative cholangiography. It is apparent that operative cholangiography will not demonstrate all intrahepatic stones; it is useful, therefore, to inquire as to its value in examining the extrahepatic ducts. The clinical indications for common-duct exploration as outlined above are accepted generally, and yet about 50 per cent of the patients so examined do not have stones. It would be a distinct advantage if operative cholangiography could be relied upon to eliminate duct exploration in the latter group. The procedure should also detect common-duct stones where the usual indications for duct exploration are lacking. The value of the procedure is in proportion to the care used. It is desirable to take at least 2 successive exposures with 5 and 15 or 20 ml. of Diodrast or Urokon respectively. The normal capacity of the common duct is 12 to 15 ml. If too much dye is used initially, small stones may be missed. It is also important not to inject air bubbles. Nevertheless, in 5 to 15 per cent of cases the films are apt to be technically poor, and in a further 5 to 10 per cent of cases the interpretation may be false. Thus, Mixter and his associates[3] found small calculi in

9 of 39 patients whose operative cholangiograms were normal; and of 74 patients with abnormal cholangiograms, 5 had normal ducts on exploration. It is apparent that operative cholangiograms may give both false-negative and false-positive findings. Even so, these authors believed that operative cholangiography had enabled them to lower the incidence of negative common-duct exploration from 45 to 31 per cent. Cholangiography will not detect biliary mud or fine particulate matter in bile. If such is found upon aspirating the common duct, then operative exploration should be done regardless of the X-ray findings. A T-tube cholangiogram is desirable before closing the abdomen. Mixter et al[3] found overlooked stones in 19 of 146 patients at the completion of common-duct exploration when this technic was used. Sullens and Sexton[9] found overlooked stones in 4 of 29 such cholangiograms taken immediately after duct exploration. There is, of course, more danger here of a false-positive reading due to an air bubble or blood clot.

A decision as to the value of operative cholangiography is a personal one, and some operators believe that careful operative exploration of the ducts is the method of choice in all indicated cases and that cholangiography does not reduce the incidence of overlooked or residual stone.

Postoperative cholangiography. Regardless of whether operative cholangiography is done, it is wise to do a T-tube cholangiogram on the eighth to tenth postoperative day. Again, extreme caution should be taken to avoid air injection. If an air bubble is suspected, the system should be carefully flushed with saline and the X-ray examination repeated in 24 hours. Twenty to 40 ml. of contrast medium should be allowed to flow into the T-tube under a hydrostatic pressure of 15 to 30 cm. of water. The patient's position is changed under fluoroscopic vision in order to attempt to fill all hepatic and extrahepatic radicles. Several views are taken as determined by fluoroscopy.

If at this time a stone is seen and confirmed and if the patient is having symptoms suggestive of retained common duct stone, the calculus must be removed surgically. If, however, the patient is clinically asymptomatic, air bubbles or blood clot should be carefully excluded by repeated X-ray studies done 24 hours following irrigation of the ducts with saline. The persistence of a negative shadow suggesting stone in such cases will also indicate re-operation in most instances. Stones are not apt to pass spontaneously into the duodenum (unless they are very small) and so will eventually give rise to difficulty. In any event the T-tube should not be removed until it is definitely established that there is no residual intraductal stone.

Results of choledocholithotomy—the postcholecystectomy syndrome. Choledocholithotomy may be expected to give permanent relief of symptoms in 80 to 85 per cent of patients. As indicated above, up to 10 per cent of patients may have recurrent symptoms due to overlooked stone. A further 5 to 10 per cent of patients may have recurrent symptoms due to several causes. The exact etiology of the so-called postcholecystectomy syndrome in patients may be difficult to define. Evaluation of such pain is difficult, particularly when it is realized that a stone may be present in the duct and cause no pain, or change its position one day and cause severe pain, or pass eventually with relief of symptoms. Other causes of biliary dyskinesia include sphincter of Oddi spasm and pancreatitis, a stone in an inadequately removed cystic duct, neuromas of periductal nerves, fibrosis of the sphincter of Oddi, penetrating duodenal ulcer, papillomata of the ampulla of Vater, and periampullary carcinoma. So-called functional pain is perhaps the hardest to evaluate. Operation and re-operation upon patients with the postcholecystectomy syndrome may be very trying to all concerned. Every effort should be made to establish the cause of symptoms prior to surgery. If at surgery no organic abnormality is found, a transduodenal sphincterotomy should be done. This permits an adequate examination of the distal end of the bile duct and also eliminates sphincter spasm as a cause for symptoms. Even so, some patients will still have symptoms, but once the ductal system has been carefully explored radiographically and surgically the diagnosis of functional pain is made more safely.

SUMMARY

A case history of residual common duct stone and multiple retained intrahepatic stones has been presented.

Stone in the common bile duct is found in approximately 10 per cent of patients operated upon for cholelithiasis.

The incidence of retained or overlooked stone following the removal of stones from the common bile duct has been reported to be from 2 to 24 per cent by various authors. The average reported incidence is about 10 per cent.

It is difficult to identify and to remove intrahepatic stones. This is one source of recurrent common-duct stone.

The usefulness of operative cholangiography has been discussed.

Most common duct stones originate in the gallbladder. It is important, therefore, to advise cholecystectomy for all patients with symptomatic cholelithiasis and for all good-risk patients with asymptomatic cholelithiasis who have a reasonably good life expectancy.

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Diagnosis and Current Surgical Management of Otosclerosis: One Hundred Consecutive Cases Treated

SAMUEL BURTOFF, M.D., Sc.D.
Washington

MANY PERSONS WITH OTOSCLEROSIS have lived much of their lives in a silent world. Some cleverly read the lips of a speaker in front of them, quite oblivious to words spoken at their side. With hidden distress and shame, they laugh with others in a social group, with no idea of the cause for merriment. Some of these persons, long anguished by their deafness, have been operated on and are noting with happy surprise that this is a noisy world. They are reveling in the music of orchestras, radio and TV—a pleasure they have craved. Best of all, they are hearing the voices of those they love.

The family doctor, who is the first to treat and observe these deafened patients, should know that many of them can be helped. He should include careful examination of the ears during routine examinations and be able to recognize the disease in its early and advanced stages. He should know the possibility of deafness following or accompanying certain specific diseases, how to prevent it, and how to treat it initially. He should further know that in many cases hearing may be restored by surgery performed by a skilled otologist by an operation requiring brief hospitalization and only infrequently followed by complications.

THE NATURE OF OTOSCLEROSIS

For a majority of patients with clinical otosclerosis the prognosis is far better than formerly believed, both for attainment of a stable level of hearing eventually and for permanent maintenance of hearing improvement after surgery.

Otosclerosis is a primary disease of the bony labyrinth with hyperplastic changes in the bone, which lead to progressive hearing loss. The normal bone is absorbed and new spongy bone produced in the hard bony capsule of the labyrinth in the vicinity of the oval window. Often the otosclerosis extends through the annular ligament into the foot plate of the stapes. Frequently the otosclerotic bone grows between the stapes and the edge of the oval window, so that they become attached, with resulting immobilization of the stapes—the factor responsible for conductive deafness in otosclerosis.

The symptoms of otosclerosis are pressure in the ears, hearing loss, occasional attacks of vertigo, at times a blueness of the sclera, a tendency to increased hearing loss during or following pregnancy, and a family history of progressive deafness. Slow progression of conductive hearing loss is symptomatic. Deafness begins unilaterally, with insidious onset. Tinnitus and paracusia willisiana, that is, hearing better in noisy surroundings, can also be symptomatic.

Surgical treatment of otosclerosis—whatever procedure is used—is directed toward restoring cochlear function, that is, conduction of traveling waves of sound from the middle ear to the cochlear fluid column; the cochlear fluid column vibrates the basilar membrane hair cells which, in turn, transmit the nerve impulse to the brain.

OTOSCOPIC EXAMINATION AND DIAGNOSIS[1]

When a patient with a hearing loss makes his initial visit for diagnosis and treatment, taking a careful history is important. The following questions relating to his hearing loss should be asked:

1. Date of onset, whether gradual or sudden
2. Whether unilateral or bilateral
3. Progressive or stationary loss; continuous or intermittent
4. Is loss aggravated by head colds or nasal stuffiness?
5. Is there a history of otorrhea or recurrent otitis media?
6. Is there a family history of deafness?
7. Whether hearing loss followed an illness (mumps, scarlet fever, measles, cerebrospinal meningitis, etc.)

Types of hearing loss. Sometimes while taking the history the physician can easily determine whether the hearing loss is conductive or perceptive in type. A patient with bilateral conductive deafness will speak softly, since his voice sounds loud to him. The patient with perceptive deafness will raise his voice, for he cannot hear himself at normal tone. A patient may incline his "good" ear toward the doctor, thus indicating deafness in the other ear.

The findings of an otoscopic examination are often quite adequate in themselves to determine whether the loss is due to an external ear lesion or to a pathologic disorder in the middle ear. Impacted cerumen, a foreign body in the external canal, otorrhea secondary to external otitis or to otitis media (acute, chronic, or secretory), eustachitis (acute or chronic), otitis media with cholesteatoma, polyps, or neoplasm can all be diagnosed upon otoscopic examination.

A physician cannot assume that after he has removed an obstruction from the external auditory canal and the tympanic membrane has been found intact that hearing is no longer impaired. For example, in the perceptive type of deafness a pathologic condition found in the external auditory canal cannot be regarded as the sole cause of hearing loss. In conductive types of deafness these obstructions may only be aggravating the hearing loss. The patient has only one objective—to secure improved hearing. He must be told the facts—that in cases of perceptive deafness his hearing will not be improved simply by treatment of the acute pathologic lesion in the conductive apparatus.

Hearing tests. Hearing tests, used to confirm the otoscopic findings, reveal whether the hearing loss is of the perceptive* or conductive† type.

A functional test should be made after therapy of an external otitis or infection in the tubotympanic cavity. These tests can include the voice test, the watch test, the tuning fork, and the audiometer. I have found both the voice test and the tuning fork to be quite dependable and simple.

Tuning fork. This instrument is very helpful in determining the diagnosis (and also the prognosis after surgery). The results are accurate enough to make a provisional diagnosis. I believe the physician will find it the simplest, most reliable instrument in correlating the patient's complaints with the otoscopic findings. However, if the tuning fork does not afford a provisional diagnosis, the patient should be referred for more detailed otologic and audiologic studies.

The Rinne test, the most widely used of the several tuning fork tests, is based on the principle that air conduction is heard about twice as long as bone conduction. In a positive test (normal findings), known as Rinne positive (R+), air conduction is found to be greater than bone conduction. In a Rinne negative (R−) air conduction is less than bone conduction. The technic is as follows:

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* Perceptive deafness: deafness due to disease of the organ of Corti.

† Conductive deafness: deafness due to defect of the sound-conducting apparatus with no disease in the organ of Corti.

Select a double vibration tuning fork (512 d.v.). A quiet room should be used. Although a soundproof one is advantageous, it is not required. Place the stem of the tuning fork on the mastoid process. When the patient indicates that he no longer hears the sound, the prongs of the tuning fork are held opposite the external auditory meatus. If the patient now hears sound through the external auditory canal, the hearing is considered normal (R+). Conversely, if the patient hears nothing at this step, the hearing is considered subnormal (R−).

To illustrate the use of the Rinne tuning fork technic, the following results show the different kinds of diagnoses for 4 patients:

Patient A: Normal hearing. His Rinne is positive because he hears vibrations of the tuning fork:
By air conduction....... for 110 seconds
By bone conduction..... for 60 seconds (R+)

Patient B: Conductive deafness. His Rinne is negative because he hears:
By air conduction....... for 30 seconds
By bone conduction..... for 60 seconds (R−)

Patient C: Otosclerosis. His Rinne is negative because he hears:
By air conduction....... for 30 seconds
By bone conduction..... for 60 seconds (R−)

Patient D: Nerve deafness. His Rinne is negative with decreased bone conduction. He hears:
By air conduction....... for 15 seconds
By bone conduction..... for 30 seconds (R−)

The Weber test, though simple, also can be of great importance. Weber testing is used in cases of unilateral deafness. The principle of the Weber test is that sound produced by the vibrating fork over the vertex is transmitted by direct bone conduction. One part of the sound waves goes directly through the skull to the labyrinth (direct bone conduction). Another part goes through the skull to the tympanic cavity (indirect bone conduction). A part of the latter is reflected to the middle ear and a part to the outside, and is lost. When hearing is normal, an equal amount is heard in both ears, since sound is transmitted to both sides. In middle-ear disease the sound cannot escape to the outside and is reflected back to the affected ear. In inner-ear disease the patient does not perceive direct bone conduction and will hear best in the unaffected ear.

Other tests may be indicated for exact diagnosis as to the locale of the lesion, whether of peripheral or central origin. Further tests will be needed to determine whether the hearing loss is progressive. The Rinne test alone would not be satisfactory in diagnosing otosclerosis; in both nerve perception deafness and otosclerosis it is usually negative. If this finding is interpreted as indicating nerve deafness and no other tests are done, the patient may be deprived of the advantages of recent otologic microscopic surgery for otosclerosis.

However, if Weber testing follows Rinne testing, the physician can make the differential diagnosis between perceptive and conductive deafness. The Weber test refers sound to the more affected ear if otosclerosis is bilateral; in perceptive deafness the Weber test refers sound to the better ear.

An audiometric study also can be done (testing specifically the 250, 500, 1,000, 2,000, 3,000 and 4,000 frequencies), or an examination made with the Oto-check, using a single or a double frequency model (2,000 and 4,000 frequencies).

Interpretations of audiologic studies are based on the response to testing various frequencies of the air- and bone-conductive system. Bone conduction indicates the perceptive mechanism of hearing. Air conduction indicates sound transmission, which to be normal requires an intact tympanic membrane and ossicular chain, and a mobile stapedial footplate. The air level and bone level in an audiogram of a patient with good hearing are both at the "O" level. Any disturbance in the sound-conducting apparatus will show a drop in the air-conduction system; any difference between air- and bone-conduction points to disturbance of the conductive system.

Incorporating such tests in the routine physical examination will aid in early detection of deafness of the acute or the progressive type, so that early medical or surgical treatment can be instituted.

CAUSES OF DEAFNESS

Any deafness which can be helped medically or surgically is usually caused by a lesion in the conductive apparatus. The diagnosis of clinical otosclerosis is by exclusion of other forms of conductive type of deafness which are due to a congenital or an acquired pathologic disorder of the tympanic cavity. Within the external auditory canal the lesion might be furunculosis, otomycosis, or stenosis. Within the middle ear the more common lesions are myringitis bullosa, acute or chronic purulent otitis media (with or without otorrhea), acute or chronic eustachitis, or otosclerosis.

Today, especially with the wide use of antibiotics, the classic subjective complaints and signs are frequently masked. Even though there is no pain, fever, or otorrhea there is always a possibility of a hearing loss which is secondary to some continued sterile secretion in the tubotympanic cavity.

SYSTEMIC CAUSES

Early treatment to the focus in the tubotympanic space, whether by catheterization or by myringotomy, in addition to medical management, may stop a progressive deafness that is secondary to an adhesive otitis media. We cannot afford to overlook the need for nasopharyngeal hygiene in cases of profuse sinus drainage which affects tubal orifices; nor can we overlook hyperplastic and infected tonsils and adenoids as causative factors for recurrent otitis media.

I cannot overstress the importance of preventive measures necessary for good hearing. We must discourage any low-grade inflammatory process which can lead to an adhesive otitis media and a conductive type of deafness.

The patient with a hearing loss should be examined also for possible otosclerosis, Meniere's disease, and tumors of the acoustic nerve. Complications secondary to mumps, typhoid fever, typhus fever, leukemia, the use of certain drugs (such as streptomycin and quinine), and occupational hazards may all lessen hearing acuity. Hysteria or malingering may be suspected when the examination is normal and the results quite inconsistent following retesting.

TREATMENT

Patients with progressive hearing loss need early diagnosis and proper guidance. Treatment may be medical, surgical, or the use of mechanical aids.

Hearing aids. The patient who buys a hearing aid before securing a complete medical and otologic examination puts himself to needless expense. Quite often he will blame the hearing aid if he has had no improvement. Although a hearing aid will amplify sound, it cannot help the patient who has nerve damage and poor discrimination in hearing (that is, an inability to understand speech clearly), the result of certain perceptive losses that allow the patient to hear speech but unintelligibly. For these patients rehabilitation measures such as lip-reading, speech-training, and auditory training are necessary.

Indications for operative measures.[2] Stapes mobilization or fenestration of the footplate of the oval window is indicated in cases in which there is a marked conductive deafness and good bone conduction. Bone conduction usually indicates the degree of cochlear functioning.

Stapes mobilization is the method of choice in cases of (1) conductive deafness with good nerve function, (2) profound deafness of otosclerotic origin (for hearing improvement with use of a hearing aid afterward), (3) unilateral hearing loss, and (4) chronically debilitated patients with a hearing loss. Patients advanced in years who have been subjected to stapes mobilization have had an excellent postoperative recovery, including closure of air-bone gap and restoration of hearing to normal or nearly normal.

Surgical complications are relatively few. Traumatic or intentional sectioning of the chorda tympani nerve may cause some discomfort in taste for a few months. Perforations of the tympanic membrane (usually corrected at the time of surgery), otitis media, external otitis, temporary facial paralysis (secondary to local anesthesia), or vertigo (due to labyrinthine irritation) may persist for from a few days to a few months.

Rosen[3] in 1952 mobilized a rigid stapes with preservation of the ossicular chain by pressure upon the neck of the stapes. Good results with this indirect mobilization were obtained in one-third of the patients. Direct mobilization of the footplate by the application of pressure along the periphery of the footplate, prying it loose from the annulus, increased the percentage of improvement as compared to the indirect procedure. The stapes mobilization technic has aroused much interest, especially in the last 3 years with the advent of newer technics.

In another procedure called "anterior crurotomy," described by Fowler,[4] the anterior crus is separated above the otosclerotic focus and the footplate is fractured posteriorly to the otosclerotic area. Although the footplate is freed anteriorly, it remains attached posteriorly. Thus the continuity of the ossicular chain is maintained.

Grafts. If the footplate is extremely rigid because of excessive deposits of otosclerosis, a stapedectomy with fenestration of the footplate is necessary for transmission of sound impulses to the inner ear. The use of the vein graft to cover the fenestra together with the use of the polyethylene tubing in reconstructing the ossicular chain has been advocated by Shea.[5] Fat graft taken from the ear lobe to cover the fenestrated footplate and use of stainless steel wire, as described by Shuknecht,[6] can also be used in reconstructing the ossicular chain.

SURGICAL TECHNIC (Figures 1, 2, and 3)

The operation is performed under local anesthesia. The preoperative medication consists of the use of Phenergan, Nembutal and Demerol, and a local anesthetic, such as Xylocaine, 2 per cent, or Novocain, 2 per cent. With the patient in the supine position, the face, ear and auditory canal are cleansed with surgical soap and Zephiran. The external auditory canal is anesthetized with Xylocaine (1 to 2 c.c.) injected in the region of the cartilaginous and bony junction. Most patients are quite relaxed by the preoperative medication, may fall asleep, and are aroused only at the end of the surgical procedure, when the hearing is tested to determine the results of the operation.

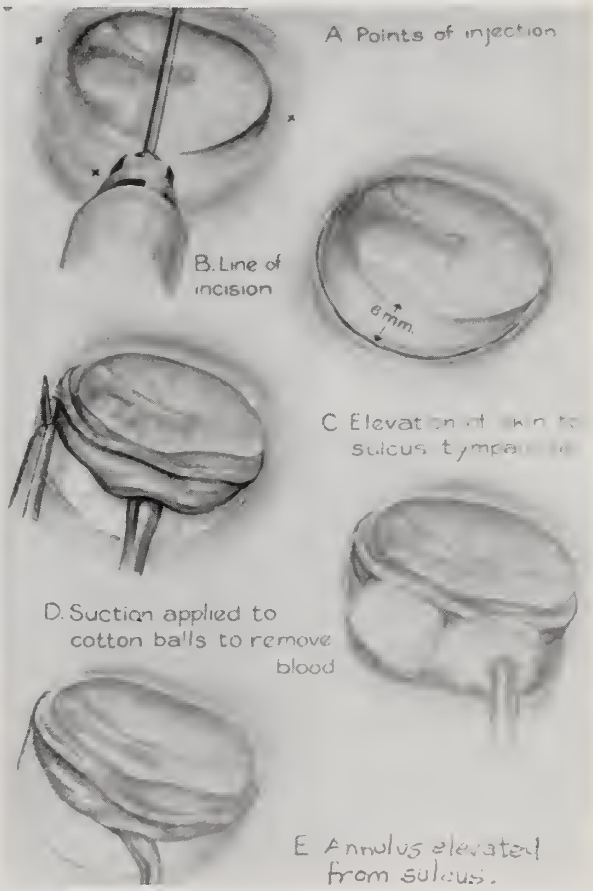
A Points of injection
B. Line of incision
6 mm.
C Elevation of skin to sulcus tympanicus
D. Suction applied to cotton balls to remove blood
E Annulus elevated from sulcus.

FIG. 1. Anatomy of the tympanic cavity and technic of stapes mobilization and stapedectomy. Intra-meatal curved incision, with elevation of meatal flap, folded upward upon itself (from Shambaugh[7]). Figures 1, 2 and 3 are reproduced by permission of the author and the publisher.

An intrameatal curved incision is made,[8] from

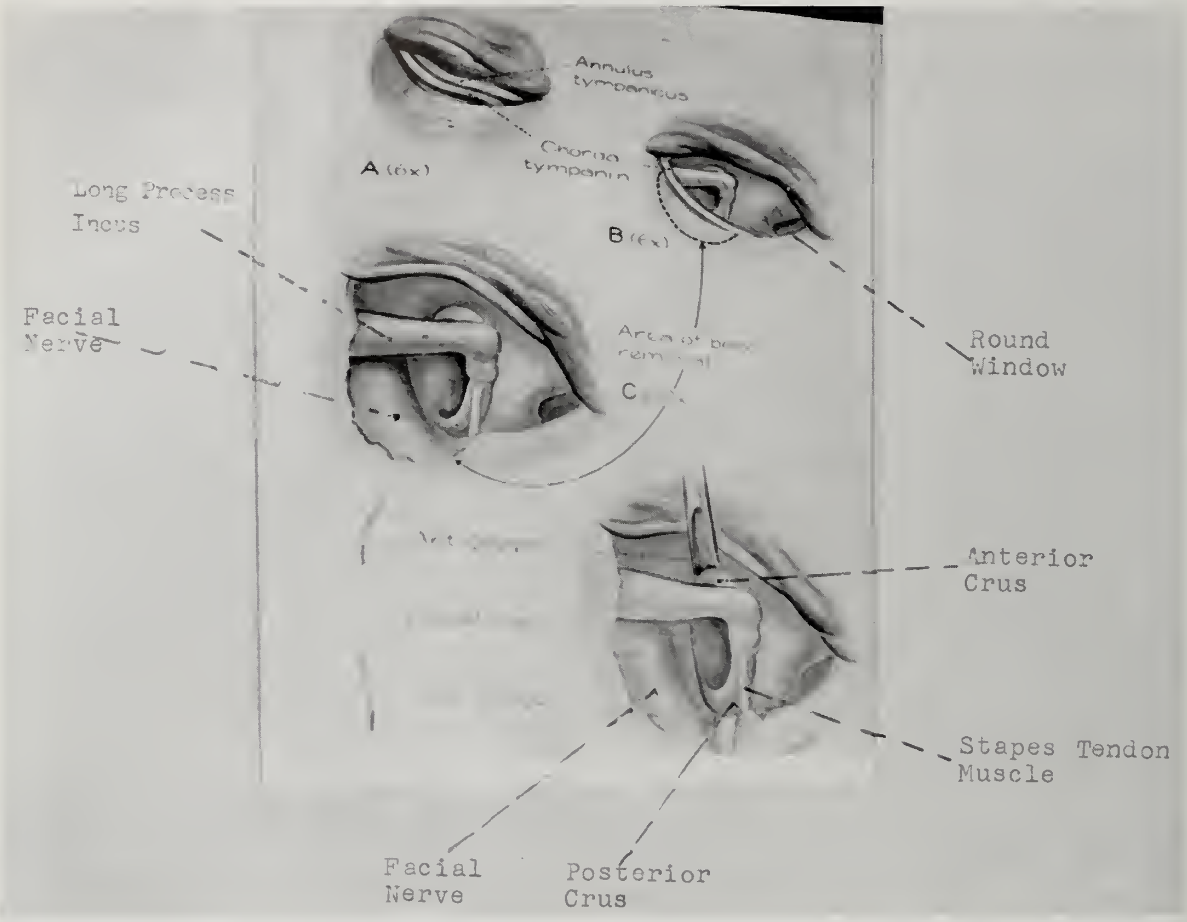
Annulus tympanicus
Chorda tympani
A (6x)
B (6x)
Long Process Incus
Facial Nerve
Area of bone removal
C
Round Window
Anterior Crus
Stapes Tendon Muscle
Facial Nerve
Posterior Crus

FIG. 2. (A) Initial exposure of tympanum; (B) bony rim removed for footplate exposure; (C) bony rim removed for footplate exposure as viewed under the microscope (from Shambaugh[7]).

12 to 6 o'clock, 2 mm. above the annulus and the flap elevated and folded upward upon itself. The first anatomic intrameatal structure seen is the long process of the incus. A few mm. of the posterior canal wall (annulus) is removed in order to visualize the remaining intratympanic structure, such as the incudostapedial junction, the head and neck of the stapes, the facial nerve, and the entire length of the stapedial tendon as well as the chorda tympani nerve. Such an exposure is absolutely necessary in stapes mobilization, especially when the footplate is to be mobilized directly, or in a stapedectomy, with or without fenestration. If the mobilization of the stapes is impossible, either by the direct or the indirect method, I usually perform anterior crurotomy or stapedectomy, depending upon whether the otosclerotic area is localized or diffused.

In stapedectomy the crura of the stapes are fractured and the arch of the stapes removed. The footplate, which is usually very sclerotic, remains in the oval window. The mucoperiosteum of the footplate is removed; then the sclerotic bone is removed either entirely or thinned down with a microdrill, and the footplate fenestrated. The fenestra is covered with a small piece of vein taken from the patient's hand or fat graft taken from an ear lobe.

Following the stapedectomy with fenestration

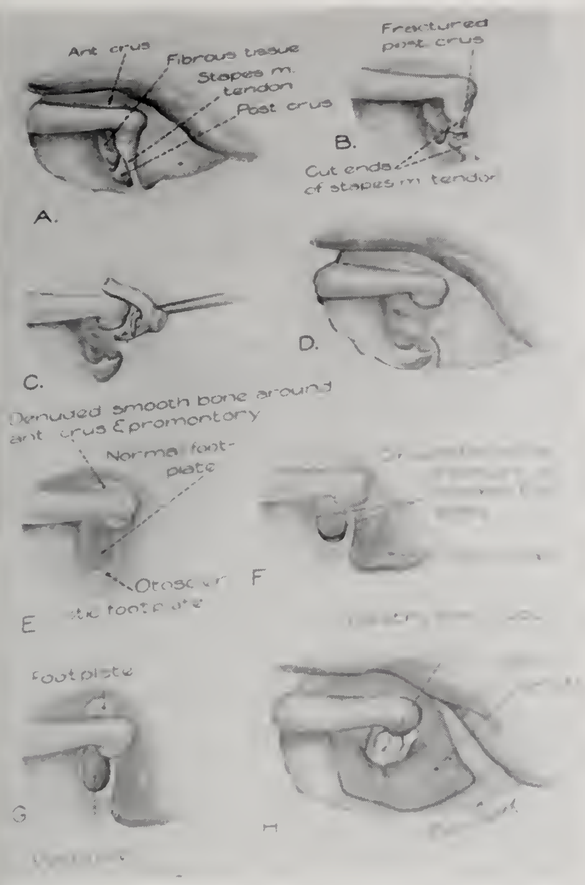

Fig. 3. (A) Exposure of stapes; (B), (C) and (D) removal of stapedial head and crura; (E) mucous membrane removed from footplate and surrounding area; (F) footplate fractured; (G) footplate lifted, exposing the vestibule; (H) vein graft and polyethylene tube in place. Following this the tympanic membrane placed in the original position and strips of nylon gauze, saturated in Adrenalin, placed over the semilunar line of incision (from Shambaugh[7]).

I favor the use of the vein graft to cover the fenestra and the polyethylene strut to reconstruct the ossicular chain. The polyethylene tubing connects the lenticular process of the incus to the graft covering the fenestra, thus rebuilding the sound-conducting mechanism of the middle ear.

The drum is placed in the original position and the patient's hearing is tested by low conversation and the tuning fork (512 d.v.). The success of the operation can usually be determined at the end of the procedure, if the patient can hear conversation (spoken-word testing) better, or if he hears better by air conduction than by bone conduction by the tuning fork test. The canal is packed with nylon strips and cotton. The patient is returned to his room and allowed to remain quietly in bed for 2 days.

POSTOPERATIVE CARE

The patient must lie quietly flat in bed on the nonoperated ear in order not to stimulate the labyrinth and thus induce vertigo, nausea and vomiting. He is instructed not to blow his nose for at least 2 weeks, since the increased tympanic pressure might dislocate or disturb the ossicular reconstruction (thus causing a hearing loss) or cause an otitis media, with or without labyrinthine disturbance and at times with secondary neurosensory damage.

At the end of 48 hours the head of the bed is raised gradually at intervals until a sitting position is reached. I usually allow 2 hours for the gradual change from lying to sitting. In the absence of any labyrinthine disturbance the patient is allowed to get out of bed. Some patients experience mild vertigo but not enough to cause disturbance. Most patients are able to leave the hospital on the second postoperative day.

The postoperative medication consists of antibiotics, Dramamine, and at times Demerol during the hospital stay and for 1 week afterward. A soft diet given in the hospital is tolerated very well. Most patients are able to return to work within a week.

The patient is seen at the office 1 week after discharge, at which time the packing is removed and an audiologic study done. In most patients the hearing improvement can be noticed audiologically and subjectively at the end of the first week. In a few patients improvement is not noted until the second or third week.

OPERATIVE RESULTS

My stapes mobilization surgery, since 1955, has been of several types: (1) Rosen's indirect and direct footplate technics, (2) Fowler's anterior crurotomy technic, when the otosclerotic focus is localized anteriorly, and (3) Shea's fenestration and vein technic (table 1).

Of these technics my results have been best with anterior crurotomy and fenestration of the footplate. Not only have I obtained a better hearing level with either of these two technics, but I have also noted less postoperative vertigo and better subjective hearing gains. There is rarely need for re-operation because of re-ankylosis of a mobilized footplate, as in Rosen's direct and indirect method, or an aggravated hearing loss secondary to a fractured crus or discontinuity of the ossicular chain, which often occurs during the attempt to mobilize the stapes by the direct or indirect method.

TABLE 1

*Operative Results in 100 Patients**

Procedure	No. Cases	Gain		Regression		Revisions	Procedure Used in Revision	Deafness Aggravated		Acute Hearing Gain	
		No.	Per cent	No.	Per cent	No.	No.	No.	Per cent	No.	Per cent
Rosen's Indirect Mobilization	35	21	60	8	38	18	0	4	11.4	0	0
Rosen's Indirect and Footplate Mobilization	20	11	55	4	36.3	9	5	3	15	0	0
Fowler's Anterior Crurotomy	14	12	85.7	2	16.4	2	0	2	14.3	3	15
Shea's Fenestration with Vein Graft	31	29	93	1	3.44	2	31	2	6.4	23	74.19

* The group consists of those with a hearing loss between 35 and 65 decibels in the speech frequencies (250–500–1000–2000–4000). The majority of patients wore hearing aids.

The worse ear was operated on first.

Hearing gain was considered only if the postoperative hearing loss in the 250–500–1000–2000 frequencies did not exceed 25 db. or if the patient was able to get along without a hearing aid.

Deafness aggravated was considered as a hearing loss of 5 to 10 db. or more in at least 2 or more of the speech frequencies of the preoperative level.

Acute hearing was considered only if the postoperative gained within 5 db. or better of closing bone-air gap in the 250–500–1000–2000 frequencies.

These general observations are based on my findings in a group of 100 consecutive operative cases. For those patients having diffuse footplate otosclerosis I used the fenestra ovalis vein graft technic with the polyethylene strut. In nondiffused cases, in which the otosclerosis was confined to the anterior crus, I used Fowler's anterior crurotomy technic.

Judging by the final hearing results in these 100 patients, I have found that the fenestra ovalis vein graft technic has produced the best results. The resumption of, or increase in hearing level was immediate and in most cases exceeded the 15 (or better) db. level in the 250, 500, 1,000, and 2,000 frequencies.

SUMMARY

The successful operative treatment of 100 consecutive otosclerotic patients by several accepted methods which I have used has been discussed. The stapes mobilization technic with recent modifications has proved to be the method of choice. Great improvement, even normal hearing, has followed surgery.

The physician should keep in mind that hearing loss can be a progressive condition, and that it is not made better by the administration of drugs, such as antibiotics, nor by use of a hearing aid. The patient with any inflammatory ear disorder should be followed up until the lesion is resolved, since the end-result may be an adhesive otitis media and an ultimate loss of hearing. The type and extent of hearing loss can be determined by the use of hearing tests.

(*Continued on page 441*)

Orthopedic Injuries Common to Airport Operations

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THIS PAPER PRESENTS a statistical analysis of the orthopedic patients seen at the Washington National Airport from the years of 1953 to 1960 (8 years). This airport is the second busiest in the Nation. It is obvious that any clinical impressions concerning a series of such cases can only be substantiated by the examination of the related statistical data.

There were 202 patients, with an average of about 25 patients per year. Each year there were about 23 males and 2 females. Maintenance and ground operations personnel made up the bulk of the patients seen and treated. Of these there were 191, while of the flight personnel there were only 11. Three pilots and 8 hostesses were treated. The average age of the former was 36 years, while the average age of the latter was 27 years. The average ages of the maintenance and ground operations personnel were 36 and 32 years respectively.

The employee most frequently seen and treated was the mechanic (table 1). Ninety-eight of them were examined out of a total of 202 patients, making a percentage of about 48.5. The most common injury sustained by the mechanics was a low-back derangement. There were 33 low-back cases (table 2). The great majority responded to conservative treatment, and only 4 cases required surgery. One patient had a protruded intervertebral disc removed and a spine fusion, while 3 had partial laminectomy for removal of protruded or ruptured disc. Next in frequency treated were mechanics with epicondylitis of the elbow or shoulder injuries (14 cases). Conservative therapy was of benefit in most instances; only 3 elbow cases required surgery, and 1 patient had an operation for recurrent anterior dislocation of the shoulder.

TABLE 1
Number of Injuries by Occupation (1953–1960)
Average: 25 patients per year
23 males, 2 females

Type of Employee	No.	Average Age
Maintenance		36 years
Mechanics	98	
Foremen and inspectors	14	
Cleaners and porters	8	
Fueling service	7	
Stock clerks	4	
Miscellaneous	5	
Ground Operations		32 years
Fleet and ramp service	14	
Agents	11	
Catering	10	
Supervisors and office staff	10	
Airport drivers	9	
Trainee	1	
Flight Personnel		
Hostesses	8	36 years
Pilots	3	27 years
Total	202	

Thirteen knee injuries were seen, and the most common lesion was a loose or torn medial meniscus. Three patients required surgical removal of the meniscus. One patient had both menisci removed in 2 operative procedures.

The other group of employees next in frequency were the foremen and inspectors as well as the fleet and ramp operators (table 1). Their

TABLE 2

Injuries Sustained by Mechanics

	No.
Low-back strains and derangements including protruded discs	33
Epicondylitis of the elbow	14
Shoulder injuries	14
Knee injuries	13
Fractures and dislocations	11
Strain of the cervical spine	5
Sprains, lacerations and contusions	2
Miscellaneous injuries	6
Total	98

TABLE 3

Groups Developing Injuries and Their Causes

Mechanics (98)	
Lifting (24)	Backs, 17 Shoulders, 4 Elbows, 3
Falling or slipping (24)	Backs, 10 Knees, 6 Ankles and feet, 4 Hands and wrists, 3 Shoulders, 1
Hitting against objects (13)	Elbows, 9 Hands and wrists, 2 Knees, 2
Pushing and pulling (7)	Backs, 6 Shoulder, 1
No particular history of injury (7)	Shoulders, 4 Cervical spine, 2 Wrist, 1
Twisting (7)	Shoulders, 3 Elbows, 2 Backs, 2
Working on heavy equipment (5)	Backs, 2 Elbows, 2 Wrist, 1
Being hit by objects (6)	Injuries varied
Kneeling (3)	Knee injuries
Jumping (2)	Back, 1 Knee, 1
Foremen and Inspectors (14)	
Falling or slipping (8)	Knee, 3 Back, 2 Shoulder, 1 Elbow, 1 Hand, 1
Kneeling (2)	Knee injuries
Jumping (1)	Knee injury
Twisting (1)	Knee injury
Hit by object (1)	Hand injury
Pushing (1)	Shoulder injury
Cleaners and Porters (8)	
Falling or slipping (4)	Knees, 2 Shoulder, 1 Leg, 1
Lifting (1)	Back
Twisting (1)	Leg
Tripping (1)	Knee

injuries varied, but the majority had back derangements, knee injuries, or fractures and dislocations (table 3).

Only 3 pilots had injuries (table 4). This may be due to the fact that they had stricter medical supervision and their duties did not expose them to the hazards of occupational trauma that the maintenance and ground operations crew encountered in their daily work.

All 8 hostesses sustained their injuries by the lurching of a plane (table 4). The effect of falling while in a high speed aircraft resulted in fractures in 2 cases and a ruptured disc in another; surgery was required in 1 of the elbow fractures and a laminectomy in the disc case.

From a study of the data accumulated, especially from tables 3 and 5, it is obvious that many of the injuries sustained could have been prevented. The majority of back injuries resulted from indirect forces. A sudden effort in lifting, falling, pushing or stretching of the spine can injure something in its complex structure. Direct blows across the back can also damage the bony structures as well as the soft tissues. Prophylaxis in the case of the acute back has to be deferred until the patient has been relieved of the acute condition which has resulted in pain and muscle spasm. Treatment varies with the severity of the symptoms, but most patients usually respond to the use of strappings, muscle relaxants taken by mouth, and rest. Not infrequently hospitalization with complete bed rest

TABLE 3—*Continued*

Caught hand in trash lift (1)	
Fueling Service (7)	
Falling or slipping (4)	Back, 3 Ankle, 1
Pushing (1)	Shoulder
Twisting (1)	Back
Caught hand in propeller (1)	
Stock Clerks (4)	
Falling (1)	Chest
Twisted knee getting out of car (1)	
Hit knee against object (1)	
Injured back lifting (1)	
Miscellaneous (5)	
Metal worker fell injuring wrist (1)	
Metal worker injured knee kneeling (1)	
Electrician injured back when step of plane broke (1)	
Electrician hit head on plane rack and injured cervical spine (1)	
Parts manager hit by tire and injured back (1)	
Fleet and Ramp Service (14)	
Lifting (7)	Back, 3 Shoulder, 2 Elbow, 1 Wrist, 1
Hitting against objects (3)	1 Elbow, 1 finger, 1 knee
Falling or slipping (3)	Wrist, 2 Back, 1
Tractor ran over foot (1)	
Agents (11)	
Hit by or against objects (5)	Injuries to various parts of body
Lifting, pushing or twisting (3)	
No particular history of injury (3)	
Catering (10)	
Falling (7)	Wrist or hand, 5 Shoulder, 1 Compound fracture of leg and compression fracture of spine, 1
Hitting against objects (2)	Elbow injuries
Twisting knee on making a sudden turn (1)	
Supervisors and Office Staff (10)	
Lifting (3)	Back injuries
Hitting against objects (3)	Elbow, 2 Knee, 1
Twisting knee stepping into hole (1)	
Injury to back pulling (1)	
File card tray fell on foot (1)	
Slipped on floor of hangar and injured back (1)	
Airport Drivers (9)	
Traffic accidents (2)	Injury to cervical spine
Hit by or against parts of car (5)	Injuries to hands and wrists
Fell at airport (2)	Hand, 1 Elbow, 1
Trainee (1)	
Injury to back bending over (1)	

and leg or pelvic traction followed by a plaster jacket applied in flexion or the wearing of a reinforced corset or back brace may be necessary. After the acute phase of the backache has been overcome and the patient is planning to return to work he should be taught some of the basic principles of proper body mechanics. It should be pointed out to the particular individual under care that when the body is used in the position of faulty mechanics there is a good chance for a recurrence of the backache. However, if he is given some knowledge as to how to correct this condition a great step forward has been made in the prevention of future back disability. Exer-

TABLE 4
Injuries Sustained by Flight Personnel

Hostesses (8)	Acute back strain Intervertebral disc rupture Strain of knee Biceps tendinitis Strain of cervical spine Colles' fracture of wrist Strain of dorsal lumbar spine Bilateral fracture of elbows and right wrist
Causes:	All injuries sustained by plane lurching
Pilots (3)	Calcification of inner femoral condyle Acute back strain Bilateral os calcis fracture
Causes:	Knee hit against plane Getting out of seat of plane Fall getting out of plane

TABLE 5
Injuries Sustained

	No. of Cases	Total
Back Derangement		67
Low back strains	47	
Upper back and cervical spine strains	10	
Protruded intervertebral discs	10	
Knee Injuries		33
Cartilage damage	19	
Ligamentous strains	4	
Pre-patellar bursitis	3	
Synovitis	2	
Cyst and tumor	2	
Osteochondritis dessicans	1	
Chondromalacia of the patella	1	
Calcification of inner femoral condyle	1	
Fractures and Dislocations		32
Wrist, hand or fingers	16	
Ankles, feet or toes	7	
Elbows	5	
Knee or leg	2	
Compression fractures of spine	2	
Shoulders		27
Tendinitis of rotator cuff	16	
Adhesive capsulitis	6	
Osteochondritis of A-C joint	2	
Complete rupture of rotator cuff	1	
Acromioclavicular separation	1	
Recurrent dislocation	1	
Elbows		24
Epicondylitis	20	
Contusions	2	
Bursitis	1	
Ulnar neuritis	1	
Lacerations and Contusions		10
Miscellaneous Injuries		9
Total		202

cises should be given to maintain proper posture and stance. The employee should be taught how to lift by bending the hips and knees and keeping 1 foot ahead of the other. The back should be kept straight, and if a load is carried it should be divided evenly between both arms. These instructions should be emphasized since there is a great tendency for recurrence of the symptoms. Persistence or increase of low-back pain may necessitate removal of a protruded intervertebral disc and in some instances a spine fusion, particularly if there should be a preëxisting acute lumbosacral angle or a spondylolisthesis.

Epicondylitis of the elbow was a surprisingly common condition. It is a traumatic disease of the common tendons of origin of the extensor-supinator group of muscles of the forearm from the lateral epicondyle. It is sometimes referred to as a radiohumeral bursitis or tennis elbow. The condition is caused by sudden, jerky or vigorous movements of the forearm, especially in pronation with the elbow extended. Although it is rather difficult for a mechanic to eliminate completely these particular movements he should be encouraged to avoid lifting with the involved arm and hand and, if possible, use his tools with the forearm in supination, with jerky movements kept at a minimum. Fortunately, this is not a serious injury and all patients respond quite well to conservative measures or to surgery.

Prophylaxis for knee injuries is important, since these injuries can result in a weak joint and may at times cause the patient to lose more than a minimal amount of time from his job. Although most knee injuries are apt to occur in violent sports, such as football, basketball or skiing, they are often an occupational injury. Any effort requiring sudden strenuous use of the knee can cause damage to a meniscus. The mechanism of this injury occurs when the knee is twisted in flexion with the weight of the body upon it. This causes the inner femoral condyle to grind down upon the medial meniscus resulting in a tear or split of the meniscus. Therefore, kneeling or twisting movements of the knee should be avoided as much as possible.

Although we have not seen any severe floorboard injuries except some lacerations, bruises and contusions, they can best be avoided by proper lighting and markings.

Since all of the accidents of the hostesses were caused by the lurching of a plane, the new proposed FAA regulation requiring all turbo-prop and turbo-jet planes to be equipped with radar should go a long way in preventing such injuries. Advance notification of turbulence with prompt fastening of seat belts should decrease the incidence of injury to the passengers as well as to

(*Continued on page 441*)

Physiologic Methods in the Study of Acquired Heart Disease

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THE REMARKABLE ADVANCES in the direct surgical approach to congenital and acquired heart disease are well known. Much of this has resulted from a greater understanding of abnormal hemodynamics made possible by the judicious use of physiologic technics applied to man.

The foundations for these accomplishments are found in the early basic animal experimentation of Starling, Frank, Wiggers, Katz and others, whose original observations are being confirmed or further elucidated in humans today. The improvement in instrumentation and catheterization technics has contributed much. Their use in the study of congenital heart disease has been well established. In addition to their diagnostic value the measurement and timing of hemodynamic phenomena have added to the interpretation of signs and symptoms familiar to all clinicians and have significantly enhanced their diagnostic implications in the bedside evaluation of the presenting pathologic physiology. It must be emphasized that a definitive diagnosis can usually be made from purely clinical criteria in the majority of cardiac patients. There are instances, however, in which more specialized studies are necessary. It is with this minority of complicated cardiac patients that accuracy of diagnosis is mandatory. This is particularly emphasized in patients with multiple valvular disease in whom the abnormal hemodynamic effects of a diseased valve may profoundly affect that of another. The advisability and selection of corrective surgery would be greatly influenced by this information. In choosing methods with which to study this group of problem cases the clinician must recommend those radiologic and physiologic methods which in a given case are likely to yield the necessary data with a minimum of risk, discomfort and expense. At times, studies most valuable from a research or investigative viewpoint may not be those expected to produce the largest amount of clinically useful data relative to the above criteria.

It is the purpose of this review to discuss these technics and the information that they offer when properly performed and to present several examples in which the studies were of great importance in the diagnosis and evaluation of selected patients with acquired heart disease.

Catheterization of the right side of the heart.[1-4] The passage of a radiopaque catheter through a peripheral vein into the chambers of the right side of the heart and the pulmonary artery has been well established as an indispensable tool in the study of most congenital lesions. There is little or no discomfort associated with the passage of the catheter, and local anesthesia and mild sedation usually suffice. In the study of acquired heart disease right-heart catheterization permits the collection of data related to cardiac output, and pressure measurements.

Cardiac output.[5] This is usually accomplished by application of the Fick principle (cardiac output equals oxygen uptake divided by the arterio-mixed venous oxygen difference). Quantitative dye dilution or isotope indicator curves may also be employed as an alternate means of determining blood flow.[6, 7] It must be emphasized that, ideally, measurements of cardiac output should be made with the patient in a basal state. This allows the comparison of a given output to a norm as well as comparing repeated determinations in the same person under different conditions. The basal state also minimizes the many variable extraneous influences that affect the level of the cardiac output. The parameters of ventilation, oxygen consumption, heart rate, and the respiratory quotient enable one to determine if the subject is in a steady or equilibrium state. For example, if during the procedure the patient is anxious and hyperventilates, this will be reflected in a greater amount of carbon dioxide expired with an increase in the respiratory quotient. Measurement of cardiac output under such circumstances would therefore not be basal. Determination of cardiac output at rest and after a standard amount of exercise is a good indication of the reserve power of the heart. One may also relate the changes in oxygen consumption relative to changes in flow as a yardstick for cardiac performance. Ordinarily the output increases at least 600 c.c. per minute for every 100 c.c. per minute rise in oxygen consumption. The arteriovenous oxygen difference also is a good reflection of the uptake of oxygen by the peripheral tissues. A widened difference would indicate increased oxygen extraction, a very early and important compensating mechanism for decrease flow to the tissue.

Pressure measurements ("PC" or pulmonary capillary or wedge pressure).[8] When the cardiac catheter is advanced as far as possible through the pulmonary artery into a peripheral branch of the pulmonary artery, the reflection of left atrial pressures may sometimes be recorded through the catheter so 'wedged' across the valveless pulmonary capillary venous bed. This is sometimes of value in that it affords information as to the level of the left atrial pressure. Such factors as obstruction at the mitral valve, elevated filling pressures secondary to left ventricular failure, or restrictive left ventricular filling (pericardial constrictive disease or intrinsic left ventricular muscle disease) may thus be indicated. Analysis of the contour of the pulmonary capillary pulse, however, has many shortcomings when compared to direct pulse analysis obtained via left heart catheterization, as will be indicated later. Finally, since the pulmonary capillary pressure is that distal to the pulmonary capillary bed, the difference of this level from the mean pulmonary artery pressure related to flow is an index of vascular resistance across the pulmonary bed. This parameter is of great value in assessing the changes that occur in the pulmonary vascular bed secondary to disease, both congenital and acquired. The importance of the pulmonary vascular resistance to the cardiac surgeon relative to the selection of patients for surgery as well as to prognosis is to be emphasized.

TABLE 1

Normal Hemodynamic Values

Right atrium	−2 to +5 mm. Hg (mean)
Left atrium	4 to 12 mm. Hg (mean)
Right ventricle	16 to 30 mm. Hg (systolic)
Right ventricle	0 to 7 mm. Hg (end-diastolic)
Left ventricle	4 to 12 mm. Hg (end-diastolic)
Pulmonary artery	12 to 30 mm. Hg (systolic)
Pulmonary artery	4 to 13 mm. Hg (diastolic)
Pulmonary artery	8 to 19 mm. Hg (mean)
Pulmonary capillary (wedge)	5 to 13 mm. Hg (mean)

Cardiac output: 2.60 to 3.60 liters per min./M^2 body surface area.

Pulmonary arteriolar resistance: less than 250 dynes/sec./cm.$^{-5}$

Pressure readings may be recorded in rapid succession as the catheter is withdrawn from the pulmonary artery into the right ventricle, right atrium and vena cava (table 1). Stenosis involving the pulmonic valve or tricuspid valve is indicated by a pressure gradient across the respective valve. The association of tricuspid stenosis with mitral and/or aortic stenosis may be suspected by the astute clinician and established during right heart catheterization by noting a diastolic pressure gradient across the tricuspid valve. Simultaneous right atrial and right ventricular pressure recordings by means of a double lumen catheter are sometimes necessary to detect this gradient. The effects of constrictive disease (pericarditis, endocardial fibroelastosis, etc.) and right heart failure are again reflected by changes in the diastolic pressure and pulse contours. The normal pressure determinations during catheterization of the right side of the heart are summarized in table 1.

Finally, in some situations the presence of a congenital lesion with intra- or extracardiac shunting cannot be ruled out. The use of indicator dye curves[9, 10] as well as recently described foreign gas technics[11, 12] may be done at the time of cardiac catheterization as a screening measure to detect the presence of such a shunt. Dye dilution technics are also of help in establishing and localizing the presence of valvular regurgitation.[13]

From the foregoing it may be concluded that right-heart catheterization would be indicated in acquired heart disease (1) when there is strong suspicion without conclusive proof of lesions involving the tricuspid or pulmonic valve; (2) to evaluate the discrepancy between a marked subjective limitation of function with little to no objective findings; (3) when there are indications of constrictive disease; (4) when follow-up studies are desirable to more accurately assess the effect of surgery; (5) to determine the presence or absence of an intra- or extracardiac shunt, and (6) to aid in the selection of patients for cardiac surgery.

Catheterization of the left side of the heart. Although some reflection of left atrial pressure may be had from the pulmonary wedge pressure, a more complete picture is sometimes possible only by catheterization of the left side of the heart. This has become of greater importance with the development of surgical procedures for the correction of mitral and aortic valvular disease. There are several approaches to left-heart catheterization: 1. Transbronchial left atrial puncture[14] is one. The left main stem bronchus lies in close relation to the left atrium, and a needle may be passed through a bronchoscope placed at the level of the carina. The needle is advanced through the left bronchus into the left atrium. A fine polyethylene catheter is then advanced across the mitral valve into the left ventricle and sometimes more distal into the aorta. Pressure recordings, valve gradients, and dye injections may be made via the needle and catheter as with right-heart catheterization. The bronchoscope and needle may also be withdrawn over the catheter leaving it in place and repeat measurements made with the patient in a more basal state after a period of rest. The transbronchial approach is safe with few complications but requires the help of a skilled bronchoscopist. 2. Posterior transthoracic approach[15] is another. A needle may be advanced under fluoroscopic guidance through a right posterior paravertebral approach. The polyethylene catheter is also threaded as above through the needle into the left atrium and across the mitral valve into the left ventricle. This method is associated with a greater number of complications, including kinking or cutting off of the catheters, hemothorax, pneumothorax, and serious cardiac tamponade.

Other technics include direct needle puncture of the left ventricle through the chest via an anterior approach.[16] The left atrium has also been entered via needle puncture through the suprasternal notch[17] advancing progressively through the pulmonary artery, aorta and the left atrium. Ross et al[18] recently described an ingenious approach to left-heart catheterization across the atrial septum. The patient undergoes a routine right-heart catheterization via the saphenous vein, following which a fine, curved needle is advanced through the catheter, placed in the right atrium, and under fluoroscopic control is advanced through the atrial septum into the left atrium. A fine polyethylene catheter may then be threaded into the left heart via the needle and across the mitral valve. This transseptal approach allows both right- and left-heart studies to be done with one procedure and is tolerated extremely well. Upon withdrawal of the needle there has been no indication of the presence of any functional defect in the atrial septum.

As with catheterization of the right side of the heart, measurements of pressure gradients across the mitral and aortic valve establish the presence of variable degrees of obstruction to blood flow across the valve. To correctly assess the degree of obstruction it is mandatory to quantitate flow of blood across the valve simultaneously with the pressure gradient.[19] With turbulent blood flow, as exists across stenotic valve orifices, the pressure gradient is proportional to the square of the flow rate. Thus, small changes in flow may profoundly affect pressure gradients. With the foregoing information it is possible to calculate the size of the stenotic orifice with reasonable accuracy by the use of Gorlins' formula.[20] This cannot be applied in the presence of valvular regurgitation, since valvular flow would include the regurgitant flow, which cannot be accurately measured with present technics. Again, indicator dilution technics can be employed during left-heart catheterization for quantitating cardiac output and also as a means of assessing valvular regurgitation and detecting the presence of left-to-right, intra- or extracardiac shunts.[21] Analysis of the left atrial pressure pulse contour has been extensively studied by several investigators and adds to the final interpretation of the data collected by these means.

Retrograde aortic catheterization.[22, 23] Catheterization of the aorta may be approached via a needle puncture of the femoral artery with a thin-wall needle through which a catheter may be passed, or the catheter may be passed directly into the surgically exposed brachial artery. Aortic cateterization has been of great value in the differential diagnosis of lesions involving communications between the aorta and the pulmonary circulation or right side of the heart. These lesions are usually characterized by a continuous murmur, for example, patent ductus arteriosus, ruptured sinus of Valsalva aneurysms, and aorticopulmonary windows. Dye indicator technics and the selective injection of radiopaque dye allow an accurate diagnosis of this group of lesions.[21] The corrective surgical approach to the respective lesion is quite different, and accuracy of diagnosis is of great importance. Minor degrees of aortic insufficiency may be detected by indicator dye dilution technics.[24] The problem of differentiating small amounts of aortic insufficiency with few peripheral signs from pulmonic insufficiency is not an unusual one but may be difficult to completely evaluate by clinical means. Finally, the presence of aortic regurgitation greatly influences the decision as to the advisability of aortic valvulotomy in cases of mixed stenotic and regurgitant aortic lesions. This should be correctly assessed.

It must be emphasized that arteriotomy is a potentially hazardous procedure and should be done by surgeons familiar with the technic.

Angiocardiography.[25–28] This important technic has been extensively reviewed with its application to the study of congenital heart disease, using both cinema photography as well as rapid single- or double-plane roentgenographic studies. The selective injection of dye into the various heart chambers and great vessels via properly placed catheters allows visualization of the effects of shunts, stenotic orifices (valvular and subvalvular), regurgitant flows, and other structural changes (anomalous vessels, aneurysms, etc.).

Recently improved technics have allowed the passage of small catheters through thin-walled arterial needles introduced percutaneously. Selective arteriography of peripheral arterial supply or renal arteriography has been of help in selected cases.[29, 30]

The following cases illustrate the use of the foregoing methods in situations where the diagnosis by clinical means was equivocal.

Case 1. A. C. was a 55-year-old colored woman with the history of hemoptysis at the age of 27. A "heart murmur" was first described at the age of 37. Thirteen years later she began to have easy fatigability and exertional dyspnea. One year prior to admission she was seen at the Washington Hospital Center for recurrent bouts of pulmonary edema in spite of maintenance on digitalis and diuretics. The blood pressure was 142/86 and the pulse 72 and regular. Examination of the heart revealed a 2-plus right ventricular precordial lift and a questionable left ventricular lift. There were a diastolic thrill and a grade IV diastolic rumble with presystolic accentuation. The first heart sound was accentuated, and an opening snap could be heard. A grade II systolic ejection murmur was heard at the base of the heart. The electrocardiogram showed normal sinus rhythm and varying T-wave changes over the left precordium. On fluoroscopic examination the left ventricle was slightly enlarged, there was normal pulmonary vasculature, and the overall heart configuration was consistent with mitral valve disease. The clinical impression was that of rheumatic heart disease with mitral stenosis predominant and a question of aortic valve disease because of the physical findings and enlarged left ventricle. The patient underwent right-heart and left-heart catheterization by the transseptal technic. Pulmonary artery and pulmonary "wedge" pressures were normal. The left atrial mean pressure was 9 mm. Hg with no demonstrable significant gradient across the mitral valve. The left ventricular pressure was 144/7, and the brachial artery pressure was 126/80 with a small systolic gradient of 18 mm. Hg across the aortic valve. There was no evidence of intracardiac shunting by screening dye curves or foreign gas technics. The conclusion was that the patient did not have operable heart disease, and she has done well on a medical regimen. The physical findings and history without the physiologic studies may well have placed her as a potential operative candidate.

Case 2. J. D., a 48-year-old colored man, gave a history that at the ages of 16 and 18 he had rheumatic fever and was told he had a bad heart. He had done well until 2 years prior to admission when he described exertional chest pain and dyspnea. Examination revealed a blood pressure of 150/60 to 160/84. There were a 2-plus left ventricular lift and systolic thrill at the base of the heart radiating to the right side of the neck. A grade V rough aortic outflow murmur was heard at the base with radiation to the right side of the neck. This was followed by a grade II diastolic blow, best heard along the left sternal border. The electrocardiogram showed left ventricular enlargement. Fluoroscopic examination demonstrated left ventricular enlargement and calcium at the base of the aortic valve. The clinical impression was that of moderately severe aortic stenosis with minimal aortic insufficiency. On right- and left-heart catheterization the right-heart pressures were found to be normal. The left ventricular pressure was 175/12 and the brachial artery 140/40 with only a 35 mm. Hg gradient across the aortic valve. The contour of the direct arterial pulse as well as qualitative indicator dilution curves suggested a moderate degree of aortic regurgitation. Again the physical findings were misleading as to the severity of the aortic valvular obstruction and the degree of associated insufficiency. It was thought, therefore, that the patient would not benefit from a surgical approach to his aortic lesion.

SUMMARY

The remarkable advances in the direct surgical approach to congenital and acquired heart disease have been in large part dependent on a greater understanding of abnormal hemodynamics. The recording of these data has been accomplished by the judicious use of physiologic technics applied to man. These methods have been summarized with a discussion of their interpretation and indications for their use in the study of patients with acquired heart disease.

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Intestinal Lipodystrophy (Whipple's Disease)

Report of a Case Diagnosed by Peroral Biopsy of the Small Intestine with the Crosby Capsule

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In 1907 a 36-year-old physician was admitted to the Johns Hopkins Hospital complaining of "loss of weight and strength; rheumatism; bronchitis; shortness of breath; dilated [*sic*] abdomen; tumor of abdomen." George H. Whipple,[1] then an instructor in pathology at Johns Hopkins University, described this case in impressive clinical and pathologic detail, thus delineating the interesting disease that has come to be associated with his name.

Farnan[2] in 1959 reviewed the 60 acceptable cases of Whipple's disease reported until that date and added 7 of his own. This series comprised 55 males and 12 females, with an average age at onset of 39 years. The diagnosis was confirmed in all instances by surgical biopsy or at autopsy. The following case is being reported because of the early age at onset and in order to emphasize the ease with which the diagnosis may now be made antemortem with the use of an intestinal biopsy device.

Report of Case

J. S., a 24-year-old white, unmarried mail clerk, came to the clinic of the George Washington University Hospital in September, 1959, complaining of easy fatigability for 4 months and diarrhea for 2½ months. The onset of the diarrhea was associated with departure for a Marine Reserve training camp, and the patient noted some improvement during weekends. Stools were 4 to 6 each day, and were described as loose, foul-smelling, and yellowish, and they often did not sink. There was a 15-pound weight loss during the 4 months prior to admission. Vomiting of undigested food had occurred about 10 times in the last 2 weeks of this period. The history revealed an episode of pain in the left hip 2 years prior to admission, and 1 year thereafter the patient was told that he had pleurisy. He also suffered from a mild, chronic cough, although he was a nonsmoker. Some time was spent in Louisiana as a teen-ager, but the patient had never been out of the continental United States. He drank unpasteurized milk as a child.

Physical examination revealed a thin, sallow-complexioned, white man with a distended abdomen and flaring of the lower rib cage (figure 1). There were pigmented areas over the sternum and dorsum of both hands, but none was found in the mucous membranes. A grade II, non-conducted systolic murmur was heard parasternally in the left third and fourth intercostal spaces. The abdomen was somewhat doughy to palpation, and the spleen tip was felt 2 cm. below the left costal margin. A firm lymph node of 1 cm. diameter was present in the left axilla, and several smaller axillary nodes were found bilaterally. Proctoscopy to 20 cm. was normal. The affect was generally appropriate, but the patient was unusually fearful of needles and other diagnostic procedures. He was quite dependent upon his mother and displayed great feelings of inadequacy.

The hemoglobin was 10.3 Gm., the hematocrit 34 per cent, the reticulocyte count 1.2 per cent and the

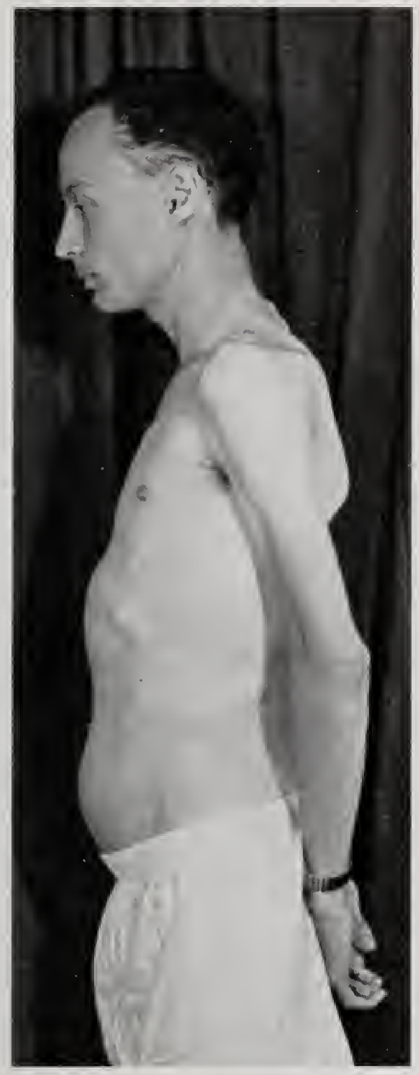

FIG. 1. Note the protuberant abdomen and flaring of the lower rib cage.

white blood cell count 6,640, with 75 per cent segmented neutrophils, 9 per cent band forms, 15 per cent lymphocytes, and 1 per cent eosinophils. The corrected erythrocyte sedimentation rate was 27 mm. in 1 hour. Platelet counts and urinalysis were within normal limits. Bromsulfalein retention was 6.3 per cent in 45 minutes, serum glutamic oxalacetic transaminase was 12.5 units, alkaline phosphatase was 7.2 Bodansky units, cholesterol was 185 and 163 mg., total bilirubin was 0.5 mg., thymol turbidity was 2.3 units, and the cephalin flocculation was negative in 48 hours. The blood sugar was 60 mg. in the fasting state, and after 100 Gm. of glucose by mouth rose to 100 mg., 100 mg., 80 mg., and 80 mg. in ½, 1, 2, and 3 hours, respectively. Serum electrophoresis revealed a total protein of 6.38 Gm. with reversal of the A/G ratio (2.40/3.98). The gamma globulin level was 1.61 Gm., alpha-1 globulin 0.57 Gm., alpha-2 globulin 0.80 Gm., and beta globulin 1.0 Gm. Stool analysis was negative for ova and parasites, and guaiac reactions were 0 to 2+. Microscopic examination of the stool showed many muscle fibers and yeast cells, and stool cultures produced only a species of Escherichia. Typhoid O and H titers were 1:80 and 1:2,560 respectively (patient recently immunized). Free acid was present in the stomach after histamine stimulation, and the urine did not contain 5-hydroxyindolacetic acid.

Intestinal absorption studies were as follows: A dose of 25 Gm. of d-xylose yielded 1.56 Gm. in the 5-hour urine specimen (normal, more than 5 Gm.). Excretion of 11.85 per cent of orally ingested I^{131} triolein (25 microcuries) and 49 per cent of I^{131} oleic acid (25 microcuries) occurred in the stool in 96 hours (normal for each, less than 3 per cent excretion).

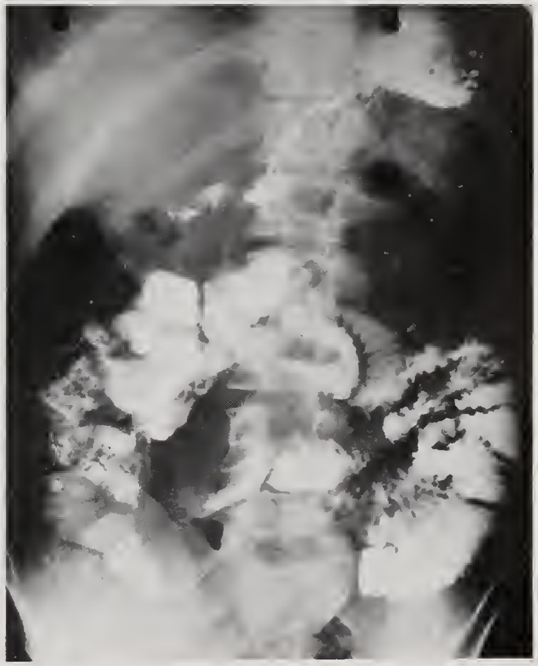

FIG. 2. Barium meal X-ray examination, showing malabsorption pattern of the small bowel.

An X-ray film of the chest showed prominence of the aorta. Barium enema showed loss of haustral markings but normal bowel distensibility. An upper gastrointestinal X-ray series revealed some anterior displacement of the stomach and splenomegaly, and a small bowel study was compatible with a malabsorption syndrome (figure 2). The sternal bone marrow showed granulocytic and erythroid hyperplasia with large metamyelocytes and an increased number of reticulum cells. The peripheral blood smear was normocytic.

The patient was treated with a gluten-free diet and folic acid, 5 mg. per day. He improved subjectively; the diarrhea decreased in severity and the weight stabilized between 110 and 115 pounds. However, the temperature spiked to as high as 39.4°C on several occasions with no specific fever pattern.

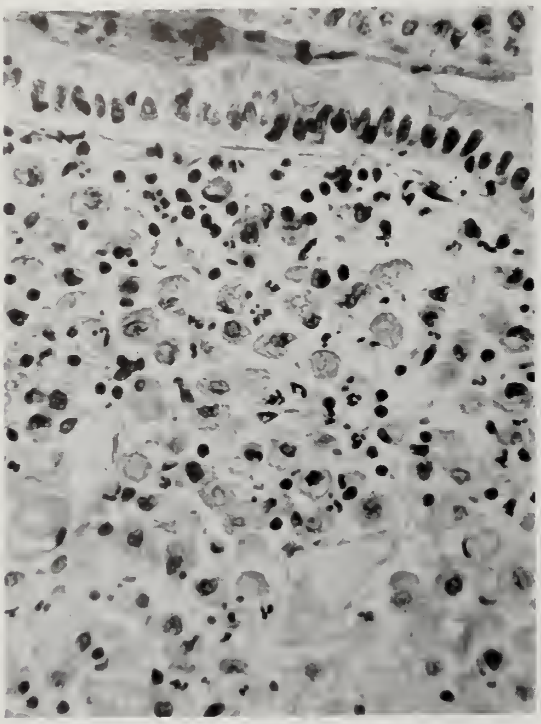

FIG. 3. Jejunal biopsy. Lamina propria contains macrophages filled with foamy material.

On November 13 and 27, 1959 the intestinal biopsy instrument devised by Crosby and Kugler[3] was passed with no difficulty. On both occasions pathologic examination revealed masses of macrophages containing periodic-acid Schiff-staining material in the lamina propria (figures 3, 4 and 5).

The patient was treated with prednisolone, 40 mg. each day, in divided doses. Six days after the start of this therapy his temperature rose to 38°C and his white blood cell count to 28,300 with 91 per cent neutrophils. Extensive workup to discover the etiology of this recrudescence of fever was entirely negative except for slight mediastinal widening (compatible with the adenopathy of Whipple's disease). Steroids were withdrawn, and the fever regressed by lysis.

The patient now has 1 sinking, nonfoul stool per day, and he has gained 10 pounds on folic acid, 5 mg. per day, and a diet low in gluten. He underwent a third jejunal biopsy on August 4, 1960, 9 months after the first biopsy. As in the case reported by Brodoff et al,[4] the findings were again diagnostic of Whipple's disease.

COMMENT

The clinical picture in this case was quite suggestive of Whipple's disease.[5, 6] The history of recent diarrhea and weight loss in a man with a past history of cough, arthralgia, and pleurisy; the physical abnormalities consisting of protuberant abdomen, pigmentation of the skin, cardiac murmur, and low blood pressure; the mild anemia; the defects in intestinal absorption; the roentgenograms of the chest and the barium meal—all were compatible with this diagnosis. Of the tissues available for definitive diagnosis, the peripheral lymph nodes may contain the characteristic foamy macrophages, but biopsy of the small bowel is more likely to be conclusive. The

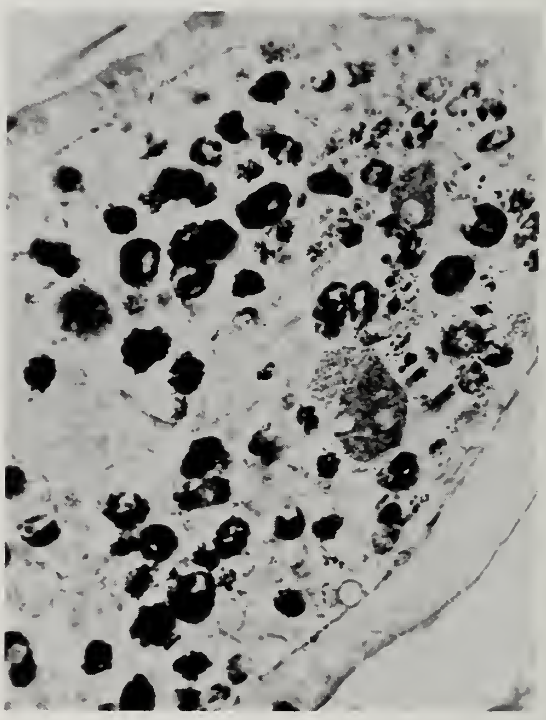

FIG. 4. Jejunal biopsy. Foamy material seen with the macrophages in figure 3 is darkly stained with Schiff's periodic-acid stain (PAS).

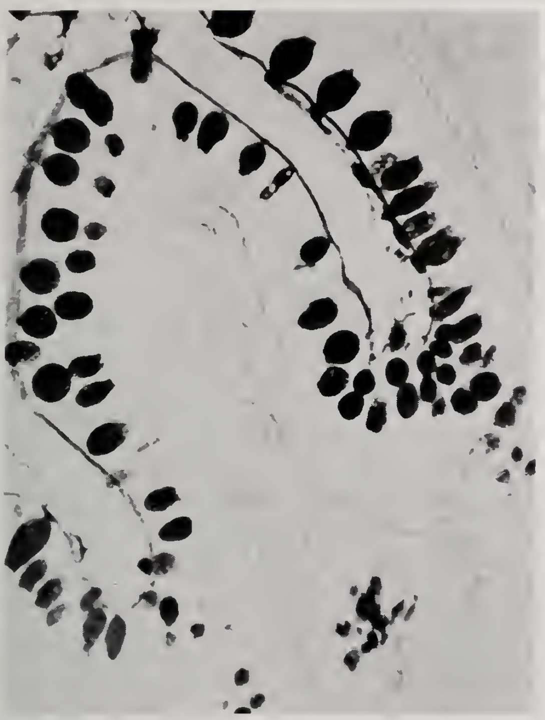

FIG. 5. Section from normal intestine. Although this is not a specimen from the jejunum, it demonstrates the lack of PAS-positive cells in the lamina propria. Only the goblet cells give a positive reaction (PAS).

simple and safe intestinal biopsy devices developed by Crosby and Kugler,[3] Shiner,[7] and Posey[8] are now easily available. Their extensive use will undoubtedly lead to the more frequent discovery of intestinal lipodystrophy, or Whipple's disease, as the cause for the malabsorption syndrome.

SUMMARY

A case of intestinal lipodystrophy in a young male has been presented. Definitive diagnosis was secured by means of peroral intestinal biopsy with the use of the Crosby capsule. Re-biopsy 10 months after the diagnosis was initially made revealed the identical microscopic appearance, although the patient was relatively asymptomatic at the time of the later biopsy.

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Warthin's Tumor

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Occurring in the parotid salivary gland are a group of lesions composed primarily of lymphoid and epithelial elements about which much confusion exists. This general group is often referred to as adenolymphomatosum or a synonym, but it is not certain that all these growths represent true neoplasms. However, there is a tumor of lymphoid and epithelial structure that occurs in and around the parotid gland that is a distinct clinical entity. This tumor is known as papillary cystadenoma lymphomatosum or Warthin's tumor.

At least 20 different names have been applied to this neoplasm.[1] Prior to 1910 it was classified with the branchiogenic and dermoid cysts of the neck and was referred to as branchioma, branchiogenic papillary cystadenolymphoma, and congenital epithelial cyst of the neck. In 1910 Albrecht and Arzt[2] in Germany recognized the true nature of the tumor and suggested salivary gland origin. Warthin[3] in 1929 reported 2 cases in this country and was the first to use the name papillary cystadenoma lymphomatosum. Unfortunately, Warthin and others did not agree with Albrecht as to the histogenesis, and much confusion as to origin and terminology of this tumor followed. Besides a branchiogenic origin, the thymus, auditory canal and the endothelium of abnormal lymph nodes were suggested as the tissues of origin.[1] The many theories apparently were due to the inability to correlate the lymphocytic and epithelial components of the tumor.

Frequently, the lymphoid stroma of this neoplasm resembles a lymph node with medulla, sinuses and cortex, and this probably led Albrecht to postulate the origin of this neoplasm as heterotopic salivary gland tissue in lymph nodes adjacent to the parotid. However, at other times the lymphoid stroma resembles an inflammatory response and has no true nodal architecture. In addition, the epithelial component of this lesion may show great variation. Often it bears a striking similarity to the epithelium lining the ducts of the normal parotid gland and at other times a "clear cell" predominates the epithelial structure. This again seemed to lead to various theories of origin.

However, Hamperl[4] and later Meza-Chavez[5] reported the appearance of this clear granular cell occurring in normal parotid glands, especially after the fourth decade. Hamperl called this cell an "onkocyte" and Meza-Chavez an "oxyphilic granular cell." This onkocyte or granular cell is evidently a normal variant of epithelium found in the parotid gland. These clear cells have also been occasionally noted in the submaxillary and sublingual glands as well as the thyroid, parathyroids and esophagus, but with much less frequency.[1]

The most significant study has been done by Thompson and Bryant,[1] who examined the major salivary glands of human embryos and normal adult glands as well as branchiogenic cysts and sinuses. They observed that the parotid, unlike the submaxillary gland, did not develop "as a closely aggregated integral unit." They noted lymphoid tissue and lymph nodes within the normal parotid gland as well as parotid ducts penetrating these lymph nodes in the embryo which in later development came to lie outside but adjacent to the capsule of the parotid. No similar lymphoid structure was noted in or near the submaxillary glands or branchial cysts and sinuses. Thompson and Bryant also called attention to the epithelial cells in these normal parotid glands as showing all the epithelial variations seen in Warthin's tumor; this was uncommon in the submaxillary glands examined. They concluded that "the mixture of epithelial and lymphoid elements characteristic of papillary cystadenoma lymphomatosum was observed only in the parotid gland and its immediate vicinity." Such structures were not observed in relation to any of the other major salivary glands. Thus, both components participate in the formation of this tumor and occur predominantly in the parotid gland. As Martin[6] pointed out, the few cases said to occur in the submaxillary gland probably represented tumors in the tail of the parotid gland, which lies in contact with the posterior superior surface of the submaxillary gland.

These findings also point out the fallacy of classifying this tumor as an oncocytoma (or oxyphilic granular cell adenoma), since the onkocyte may play only a minor role in its formation. However, as suggested by Ackerman,[7] they are probably closely related.

CLINICAL FEATURES

Prior to 1955 only 120 cases of Warthin's tumor were recorded, indicating the tumor is rare. However, in our experience this has not been true. From the year 1955 through 1959 we have removed 65 parotid tumors. Twenty-eight were malignant and 37 benign. Of the benign tumors, 10 were papillary cystadenoma lymphomatosum, an incidence of almost 15 per cent. It is not clear why previously so few cases have been reported. Perhaps they were classified and recorded as "adenolymphomas." Certainly more will be seen, since the reluctance to operate on the parotid gland because of fear of injury to the facial nerve has greatly changed in the past 10 years.

As in other series,[8] our cases occurred predominately in males in the fifth and sixth decade. The youngest patient was 43 and the oldest 85. Two patients were females. Three tumors were discovered on routine physical examination, and the remainder had been present from 1 week to 2½ years. Warthin's tumor is characterized by slow growth or long periods of inactivity. The lesion known to have been present 2½ years measured only 3.5 cm. when removed, and during this interval the patient had noted no enlargement. In all cases the swelling was discrete and painless but was difficult to distinguish from mixed tumor of the parotid gland, which was the preoperative diagnosis in 4 cases. There seemed to be a predilection for this neoplasm to occur at or just inferior to the angle of the mandible in a position slightly lower than most parotid tumors. Facial palsy was not noted in any of the patients.

TREATMENT AND RESULTS

Surgical excision was performed in 9 patients by exposing the main trunk of the facial nerve and removing the tumor with a margin of normal tissue. The tumor was in the superficial lobe (superficial to the seventh nerve) in each case.

In 1 case the lesion was located at the bifurcation of the carotid artery several cm. inferior to the parotid gland and was thought to be a lymph node. A small area of parotid tissue was present in the specimen, but no branches of the facial nerve were seen at the time of removal. This could be explained on the embryologic findings of Thompson and Bryant, since similar locations have been reported.

The neoplasm usually has a characteristic appearance and can often be identified at the operating table. It appears to be circumscribed and has a yellowish-brown appearance. It cuts easily, and the transected surfaces of the tumor often show a brownish, mucoid material. Small cysts of 1 to 2 mm. may be noted.

The local recurrence rate has been reported as from 0 to 12.2 per cent.[9, 10] In none of our 10 pa-

(Continued on page 442)

Primary Carcinoma of the Vagina

Report of a Case with the Surgical Mode of Therapy

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PRIMARY CANCER OF THE VAGINA is a rare disease. The prognosis is uniformly poor and the mortality high. There is no agreement as to therapy. The purpose of this report is to present a case of primary carcinoma of the vagina in which it was adjudged that surgical extirpation was indicated and to endorse a combined vaginal and abdominal approach.

REPORT OF CASE

E. W., no. 100-533, a 31-year-old Para III, gravida III woman, was admitted on October 22, 1959. Her last normal menstrual period was October 12, 1959 and of 5 days' duration. She had delivered her last baby 16 months prior to this admission. Postpartum examination revealed a normal vagina with no visible lesions and no evidence of cervicitis or abnormal discharge. For 2 to 3 months prior to admission she had noted genital "spotting" following douching and coitus, the last occasion being on October 19, 1959. A foul-smelling vaginal discharge was also noted by the patient for 4 to 6 months. She denied a past history of using a diaphragm for contraception and has never worn a pessary.

The general physical examination was negative. Pelvic examination revealed a cauliflower-like mass occupying the vaginal vault (figure 1). Closer examination revealed the lesion to arise from the posterior wall and to involve the upper and middle third of the vagina. There was approximately 1.0 cm. of normally appearing vagina between the lesion and the cervix (figure 2). The anterior vaginal wall and cervix were free of any lesions. The uterus was of normal size and shape, and no adnexal masses were palpated. Rectovaginal examination revealed no gross evidence of involvement of the rectovaginal septum by digital palpation, and the rectal mucosa underlying the lesion was resilient and mobile. The clinical impression was primary carcinoma of the vagina (Courtial stage I).

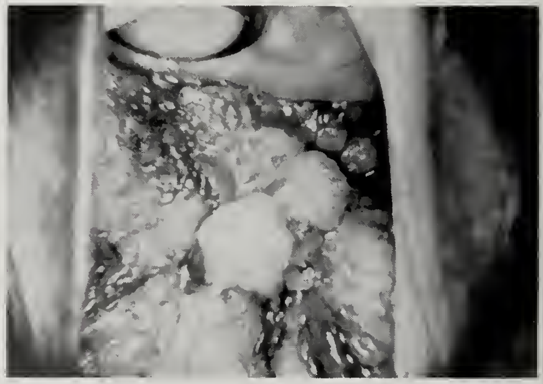

FIG. 1. Vaginal view of cauliflower-like carcinoma filling the vaginal vault. (Ring forceps on lower lip of cervix above.)

On October 23, 1959 examination under anesthesia confirmed the aforementioned findings. At this time a uterine curettage and biopsy of the cervix and vaginal lesion were performed. The pathologic report showed (1) well-differentiated, squamous-cell carcinoma of the vagina (figure 3), (2) endometrium, proliferative phase, and (3) cervix, chronic inflammation mild.

Intravenous pyelogram and cystoscopic examinations were normal. Surgical consultation disclosed no involvement of the rectal wall. Complete blood chemistry and hemogram were within normal limits. A roentgenogram of the chest and an electrocardiogram were normal.

Prior to surgery ureteral catheters were inserted. A total vaginectomy, radical hysterectomy and bilateral lymphadenectomy were performed en bloc (figure 4). The left tube and ovary were not removed because of the patient's age. Dissection was initiated vaginally and completed transabdominally. Six units of blood were transfused. A sterile gauze pack was placed in the vaginal space, and a Miller wick was placed subperitoneally overlying the ureters and brought out through the vaginal space.

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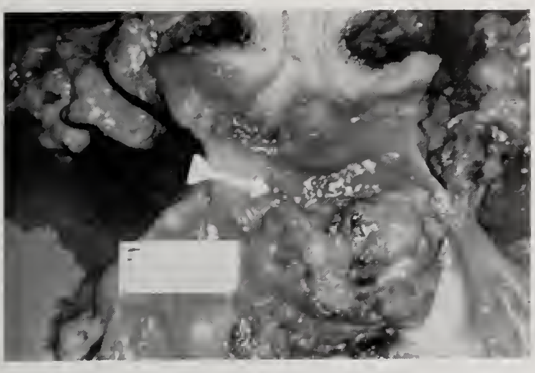

FIG. 2. Close-up view of the malignant lesion and cervix showing (arrow) intervening 1.0 cm. of normal vagina.

The immediate postoperative course was somewhat stormy. There was a drop in blood pressure to 78/60, and the pulse rate increased to 140 per minute but returned to normal after an additional transfusion of Vasoxyl. On November 2, 1959, the third postoperative day, the urinary output was 1,500 c.c. and clear. The vaginal packing was completely removed by the fifth postoperative day by the extraction of small lengths every 12 hours beginning on the third postoperative day. Antibiotic vaginal suppositories were placed in the vaginal space. On the seventh postoperative day a balsam wood mold was fashioned for the patient and placed in the vaginal space to prevent its closure. The indwelling catheter was removed on the fifth postoperative day but was replaced because of 150 c.c. residual urine. On the ninth postoperative day it was again removed and the patient voided spontaneously thereafter. On November 4, 1959 the patient was discharged. A functional vagina will be constructed at a later date. The pathologic report showed well differentiated squamous carcinoma of the vagina with no microscopic evidence of infiltration beyond the vaginal wall, the paravaginal tissues free of malignancy, and the lymph nodes normal.

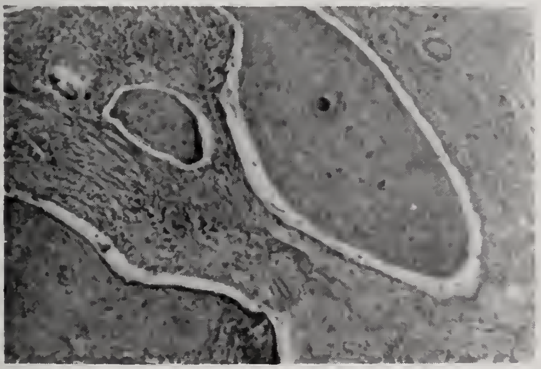

FIG. 3. Biopsy of malignant lesion showing a well-differentiated squamous carcinoma with pearl formation.

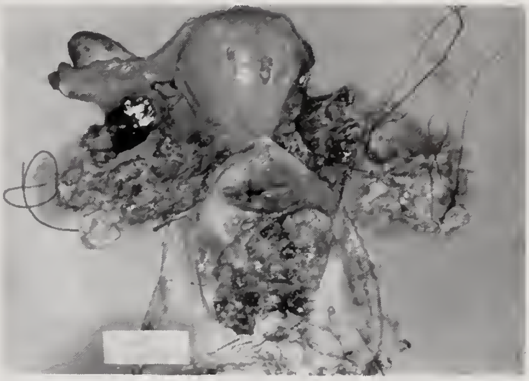

FIG. 4. Total specimen removed by en bloc dissection.

COMMENT

The surgical treatment of primary carcinoma of the vagina has been maligned because of poor results. This is admittedly true; results of treatment by all methods are poor. To our knowledge there are no written reports as to the effect of chemotherapy for carcinoma of the vagina. Irradiation has been administered timidly because of fear of damage to the bladder and rectum. A clearly defined method of surgical treatment is not always possible due to difficulty in selecting cases, the nature and location of the lesion, and the fact that cases are often far advanced when they are first seen.

There is no immediate answer to the problem of determining with scientific accuracy the extent of the lesion, but it has been noted that primary vaginal cancer may become quite bulky before penetration of the underlying tissues.[1] In those cases in which it appears clinically that the lesion has not extended beyond the local limits of the vagina surgical extirpation is the treatment of choice.

Parsons[2] recommends total vaginectomy and bilateral pelvic lymphadenectomy when the size of the lesion and condition of the patient are amenable. Corscaden[3] advises surgery if the growth is localized to the posterior vaginal wall, and Smith[4] concludes from his analysis of 109 cases that more radical surgery should be utilized in cases detected early, but that selection of patients must be made with the utmost care for optimal results.

The preceding case bears out the fact that exophylic vaginal cancer may show extensive growth into the vagina without involvement of the underlying tissues. The basic tenets of the mode of surgery used here are not new; the combined vaginal and abdominal extirpation of vaginal cancer is alluded to in Graves' Gynecology.[5]

The technic used by us is essentially a total vaginectomy by circumcision of the vaginal wall (mucosa and fascia and smooth muscle) in such a way as to form a cuff which is closed in a purse-string manner to entomb the lesion. Further dissection forming the vesicovaginal and vesicouterine spaces and separating the bladder is performed, with further formation of the right and left paravaginal spaces. The ureters may be isolated from below and ligation of the uterine arteries done prior to abdominal dissection. The abdominal procedure is essentially an extended radical hysterectomy with bilateral pelvic lymphadenectomy.[6]

A functional vagina may be constructed immediately, or a plastic or balsam wood mold may be placed in the vaginal space to prevent its closure and the artificial vagina constructed at a later date.

SUMMARY

Primary carcinoma of the vagina has a poor prognosis and a high mortality. For optimal results with surgical treatment cases must be selected well. A case has been presented illustrating primary vaginal cancer which may grow extensively into the vaginal vault prior to the penetration of underlying tissues. A combined vaginal and abdominal mode of surgery has been presented which is particularly suited to this type of lesion.

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A Note on Anorectics

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MUCH HAS BEEN WRITTEN about overweight, its etiology, its physical hazards, and its treatment. Yet all that is known about overweight is that the condition is usually chronic and is caused primarily by eating more than is needed to meet metabolic requirements. The most effective treatment is restriction of food intake, yet, as in any chronic disease, this treatment can be considered as successful only when the patient loses weight and maintains body weight within normal limits. Unfortunately, this criterion cannot be used to evaluate an anorectic because, unlike an antibiotic, an anorectic cannot cure. It only helps on a temporary basis; it seldom can be expected to have much effect on long-term weight loss.

Nor is the rate of initial weight loss a very satisfactory index of success. It has, of course, been a frequent subject in studies of weight reduction, the inference being the more rapid the weight loss the more effective the medication. In fact, formulas have been worked out to determine if the rate of weight loss is satisfactory.[1] However, when the ultimate purpose of treatment is considered, the inference seems unduly hopeful, because there is no evidence that the rate of initial weight loss bears much relationship to the ultimate success of treatment. Obviously, the patient who loses weight slowly but maintains his weight loss is more successful than one who loses his overweight rapidly and then regains it.

It is also difficult to assess long-term treatment of obese patients in the ordinary course of one's own practice. If treatment has been successful the patient generally does not return, unless, perhaps, some other illness develops. For instance, a patient of mine, a woman of 33, weighed 180 pounds; over a period of 6 months she lost 45 pounds, then suddenly stopped treatment and has not returned for over a year. Thus, the person who has a chance of achieving real success in weight control is, more often than not, lost from view, and one never knows what the final results of treatment were. On the other hand, those who are unable to sustain weight losses seek treatment time and time again. One such patient, who at first weighed 190 pounds, has been under treatment at various times since 1946. At one point she had lost a total of 40 pounds but regained it, and over the years each attempt to lose weight tended to become less and less successful. In the last year, anorectics used alone seemed to have little effect on her appetite, but she managed to achieve further weight loss when a tranquilizer was given along with amphetamine.

Nevertheless, judging the effectiveness of an anorectic by recording weight loss is perhaps the only way to provide an objective basis for comparisons, but for the most part, at least in my experience, the amphetamines and related compounds are all about equally effective, while side-effects of nervousness and insomnia that often occur are equally annoying. As Modell[2] pointed out, however, stimulation and anorectic effect go hand in hand, and loss of appetite appears to be caused more by the feeling of well-being than by any direct effect on appetite centers. This stimulating effect of the amphetamine distracts the patient from his basic tensions and anxieties, said to be the cause of overeating, thus enabling him to diet more easily. But like any stimulus that remains constant for any length of time, the patient may become accustomed to it, often within a month or so, and his basic emotional problems once more assert themselves. The result is a loss of anorectic effect and the return of the patient's appetite. In other patients, while the amphetamines may help control appetite, they do little to allay underlying tensions and anxieties.

Perhaps it is for this reason that chlorpromazine, even though it may induce weight gain when given in relatively large doses for prolonged periods of time, has been found effective in patients for whom other forms of therapy had failed.[3, 4] Since then others[5, 6] have also reported tranquilizers to be a helpful addition to the reducing regimen. Over the past several years instead of chlorpromazine I have been using prochlorperazine singly or in combination with amphetamine, because it relieves anxiety and tension states without causing lethargy or otherwise interfering with the patient's everyday activities. Some obese patients with marked overeating find that they can reduce food intake and lose weight on prochlorperazine alone. Most, however, generally do better on the combination of tranquilizer and amphetamine. It is sometimes necessary, of course, to titrate the dose of each drug on an individual basis, but usually the combination of 7.5 mg. of prochlorperazine and 15 mg. of dextro-amphetamine is satisfactory. Surprisingly, the rate of weight loss initially achieved has not been greatly superior to that obtained with amphetamine alone, but of the nearly 200 patients treated to date most seem to prefer the combination and find that with it they are able to stay on a low-calorie diet longer. Side-effects still occur, but seem less of a problem than with amphetamine alone.

This, I think, is the essence of the evaluation of an anorectic. It is not a cure; it is a crutch. As such it can be evaluated principally on 3 points: Does it help the patient maintain the proper diet, is it free of dangerous side-effects, and does the patient like it? The tranquilizer-amphetamine seems to meet these criteria better than most. But one cannot overlook the possibility that the combination, when viewed in the light of what is known about overweight, makes sense and, therefore, the physician himself tends to "believe in it." In a treatment situation that is so dependent on physician-patient rapport, the physician's confidence in the medication may, in itself, influence the patient, thus enhancing the therapeutic benefits of the entire treatment regimen. And, perhaps, for this reason the use of an anorectic, like the present-day treatment of overweight itself, seems to require more medical art than it does medical science.

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PRESIDENT'S PAGE

NOT BY BREAD ALONE

By comparison with all previous times this is the age of science. More particularly, it is the atomic age. Everywhere men want to be objective, to deal in facts, and to know rather than simply to believe just because of faith. Many believe that we are too materialistic. All agree that our system of science has developed so fantastically as to outstrip the growth of humanity. Our growing control of the world around us has not waited for the slow organic evolution of man. The unbridled use of unthinkable power for destruction is the constant fear of thinking men.

Medicine, so close to people, so much a part of daily life, is naturally responsive to the surrounding atmosphere. Concentration on developing laboratory methods, often to their overutilization, and the dividing of responsibility for individual patients due to spreading specialization are factors leading to the public image of our profession as being more distant and less warm than formerly.

People understand our economic changes to produce leveling of incomes and ability to pay among individual members of society. They approve and support the development of our credit economy with resultant demand for prepayment of health care costs under fee schedules based on group averages. They are far less tolerant of charges based on gross income so that isolated abuses are excessively aggravating. All this leads to the repeated observation that the public image of the profession may be bad while each patient likes his own doctor.

We may be excused for denying full responsibility for this sad state of affairs but there is no excuse whatever for failing to see that it exists. Furthermore it should be clear that it is related to an apparent depreciation of the art of medicine with its understanding respect for human values.

At this season of the year there are cogent reminders of the validity of this conclusion. Thousands of recent graduates have vowed allegiance to their profession by repeating the oath of Hipprocates without being able to realize that the complexities of the scientific curriculum just completed have, by omission at least, tended to lead them astray from some of their sworn principles. The glimpse of the "Light from Lambarene" brought by Mark Evans to our Society a few weeks ago was known by the few who saw it to be a symbol of the finest in the healing art.

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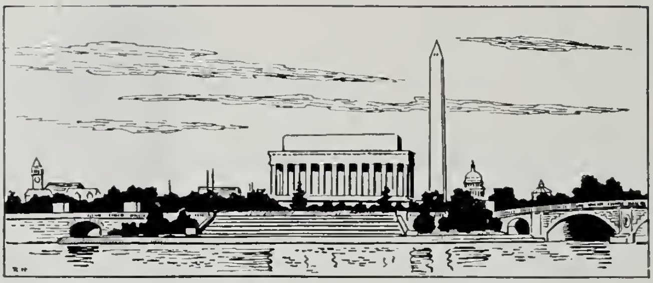

EDITORIALS

THE ART OF THE PRACTICE OF MEDICINE

The practice of medicine is like a coin. It has two sides—the science and the art. They are inseparable. Both are important, but the art is learned only after formal medical education is completed, unless the young medical neophyte is innately endowed with the necessary attributes. Unfortunately and understandably, the art of practice is not taught in medical schools. This is a tremendous shortcoming in our system of medical education. Is there a solution? As we see it, only the preceptorship method, whether with a single physician or a private medical group, is the answer, but this is taboo in most quarters, or, at least, not considered practical. More and more, part-time instructors are being eliminated from medical school faculties and are being replaced by young full-time men who never engaged in private practice. More and more, medical school graduates are becoming dependent upon expensive laboratory methods. The result is inevitable—the cost of medical care will rise, giving the advocates of socialized (government-controlled) medicine ammunition for their cause.

The art of medicine includes the polished, empathic handling of patients and their relatives and friends, sincere interest not only in their physical and mental health but in their economic welfare also, how to keep in contact with patients who when they feel well forget about the doctor, when and what laboratory examinations to order, when to call in a consultant, when to hospitalize, how to run the office and control the office personnel, what fees to charge, and a host of other things. During the years of hospital training the young physician becomes dependent on the aid of the attending physicians and the laboratory; when he leaves the hospital he is suddenly thrown on his own resources.

The first years of practice are the hard ones, both from the necessity of learning how to practice medicine and "keeping the wolf from the door." God help the young physician just entering private practice. And let us help him all we can.

SHAPING PUBLIC ATTITUDES

The medical profession, traditionally and basically, always has been concerned primarily with the welfare of the patient. There is cause for concern, however, that in recent years this basic concept has been weakened in the eyes of the general public.

One of our problems is that a distinction has arisen in the minds of at least some members of

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia

the public between medicine as an organized institution and medicine as exemplified in the individual relationship between doctor and patient.

Under the impact of recent socioeconomic and political issues, the activities and policies of organized groups, such as the AMA, have played a relatively greater role in shaping public attitudes toward medicine generally.

An analogy may be drawn between the image of the United States in the eyes of the world and the image of medicine in the eyes of some members of the American public. The average American citizen abroad may develop a warm, friendly, person-to-person relationship with a foreign national; and yet his foreign friend may have a suspicious or doubting attitude about the activities and policies of the United States as a nation. Similarly, some people may like and respect their individual physician but hold to certain distrusts about an organized group such as the AMA.

In these circumstances two courses are indicated for medicine as a profession. First, we must seek to correct misunderstandings and misinformation about the role and nature of organized medicine. Second, each physician must recognize the importance of his personal relationships with his patients and seek to restore these relationships to a more dominant role in shaping the public's attitude toward medicine.

It is essential for the public to know that the medical profession, both as an organized institution and individually, is deeply concerned with the health and welfare of patients and not primarily concerned with the socioeconomic status of doctors. It must be made clear to the public, for example, that the physicians' opposition to socialized medicine, or to moves in that direction, is not motivated principally by personal self-interest. Rather, physicians feel a trend toward government medicine would lead to a deterioration of medical services to the individual—and this is the basic reason for our concern.

The argument over political and economic issues tends to obscure the many excellent, constructive, and progressive contributions to health by the AMA. Perhaps the AMA needs to place more emphasis in its public pronouncements on these health contributions, and less emphasis on socioeconomic issues.

Attitudes toward the AMA are influenced unfavorably by the fact that the AMA seems to be always "against" some publicized proposal by others which is ostensibly aimed at easing the economic burdens of medical care. Any organization on the defensive tends to suffer in public stature. The public needs to understand more clearly that the AMA is a democratic organization composed of men elected by diverse members in all our states and territories, and that all doctors do not always agree with all AMA pronouncements on socioeconomic issues.

The medical profession must realize that the increased cost of medical care, resulting from increased medical knowledge, higher medical standards, and the necessary but highly expensive large medical staffs in our hospitals, constitutes a real problem to many people. This hits the pocketbook of the average patient and he doesn't like it. People do not always recognize and take advantage of the availability of relatively low-cost medical insurance, although such insurance often costs less than automobile insurance. The medical profession must work toward a better public understanding of the economic factors in medical care and wider public use of the mechanisms available for meeting these necessary costs.

The Medical Society of the District of Columbia has attempted in many ways to establish good will and to demonstrate its concern for the health of the people. The Committee on Public Information and Education performs many functions. It conducts teaching seminars for office assistants, who are our first line of defense in public relations. It maintains an excellent rapport with the working press, radio, and TV, and participates in many radio and TV programs.

It distributes various health brochures to doctors' offices and to patients. The Committee is active in science fairs and helps arrange for lectures to schools on careers in medicine and other medical subjects.

The District Society encourages positive action to meet socioeconomic needs in medicine. The District's delegates to the AMA were instrumental in winning approval for the AMA's recent positive approach to improving prepaid voluntary medical insurance on a national basis.

The most important factor, however, is not the effort made by the AMA and various local committees; all this means very little compared to the influence of the individual physician's relationships with his own patients. All the efforts of organized medicine to establish public understanding of the dedicated nature of the medical profession can be sabotaged by the doctor who seeks unreasonable charges, who unnecessarily keeps patients waiting too long, who fails to reach a clear understanding with his patient about house calls, who leaves his practice without an alternate, who will not contribute to civic and charitable needs of his community, who naïvely tends to "show off" his hard-earned economic status.

We know that the American system of private medical care offers greater benefits to patients than any in the world. Let us rededicate ourselves to strengthening our relations with individual patients so that they will be convinced of our ideals through the policies and practices they see every day in us. If we do this, we can be more assured that the American public will not accept any less desirable system of medical care.

PAUL R. WILNER, M.D.
Chairman, Committee on Public Information and Education

EMERGENCY HOME PSYCHIATRIC CONSULTATION

When a person in the District of Columbia becomes mentally ill but refuses to seek treatment, an emergency situation frequently arises. Our commitment laws are rigid (in the view of most psychiatrists, excessively so) and many families are unable to obtain the medical evidence required for commitment on a private basis. We are happy to be able to announce that with funds made available by the Congress the Emergency Home Psychiatric Consultation Program, which is outlined in the "Proposal" elsewhere in this issue, has now been placed in operation.

The service is designed to reach those persons in the District of Columbia whose family resources are not sufficient to enable them to obtain private care. In general, the service will be appropriate where there is good reason to suspect a serious mental disorder (usually such as to raise the question of need for hospitalization) and the person involved refuses to leave his home to seek examination or treatment. We hope that the psychiatric visits provided will eliminate the need of hospitalization in appropriate cases and provide the means for hospitalization in others.

The social worker at the Adult Mental Health Clinic of the Department of Public Health (3246 P Street, N.W.) will handle calls for the service. The special number for this service is Federal 8-1077; the social worker may also be reached on the regular clinic number, National 8-6000, extension 3205. Calls should come from someone in a responsible relationship to the patient, since it will be necessary for someone to be at the home to receive the psychiatrist and to work further with the situation after the psychiatrist leaves. Calls will be received during regular business hours (Monday–Friday, 8:15 to 4:45). When the clinic is closed an answering device will be placed on the circuit, explaining what the service provides and when it may be contacted.

The panel of psychiatrists who have contracted to make these visits now numbers 14. There is a pressing need for the participation of additional qualified psychiatrists in order to cover the demands for service without making more than an occasional request of any one individual. Psychiatrists willing to participate may call the Bureau of Mental Health, National 8-6000, extension 3375, for application forms.

We very much hope that this new service, which was developed in collaboration with the Washington Psychiatric Society, with the support of the D. C. Association for Mental Health and the interest and encouragement of the Committee on Mental Health of the D. C. Medical Society, will prove to be a significant step in improving the care of the mentally ill in our city.

George W. Metcalf, M.D.
Chief, Bureau of Mental Health, District of Columbia Department of Public Health

MEDICAL SCHOOL SHORTAGE OF CADAVERS

Because of the general public's increasing awareness of the acute need for bodies for medical education and research, physicians may be asked by patients whether they can will their bodies to a local medical school for the advancement of medical science.

These inquiries should be welcomed; in fact, they should be encouraged. One should appreciate that a patient's inquiry indicates his deep personal interest in our problem and does not necessarily suggest a break with normally accepted conventions nor a disregard for traditional faith. An expressed wish to make a body available after death for the advancement of anatomic science is in the finest spirit of service to mankind and should be graciously encouraged.

To help physicians answer these inquiries may we state that each of the three local Medical Schools have appropriate forms that they will gladly send these individuals. They can call the Department of Anatomy of any school and a form will be promptly mailed. The handling of the body will be made without expense to the family.

Our current supply of cadavers is running far behind our needs for the coming school year. We hope the profession will do its utmost to persuade interested patients to help solve this problem which is critical for the future of medical education.

Othmar C. Solnitzky, M.D.
Georgetown University
Ira R. Telford, Ph.D.
George Washington University
W. Montague Cobb, M.D.
Howard University
For the Anatomical Board of the District of Columbia

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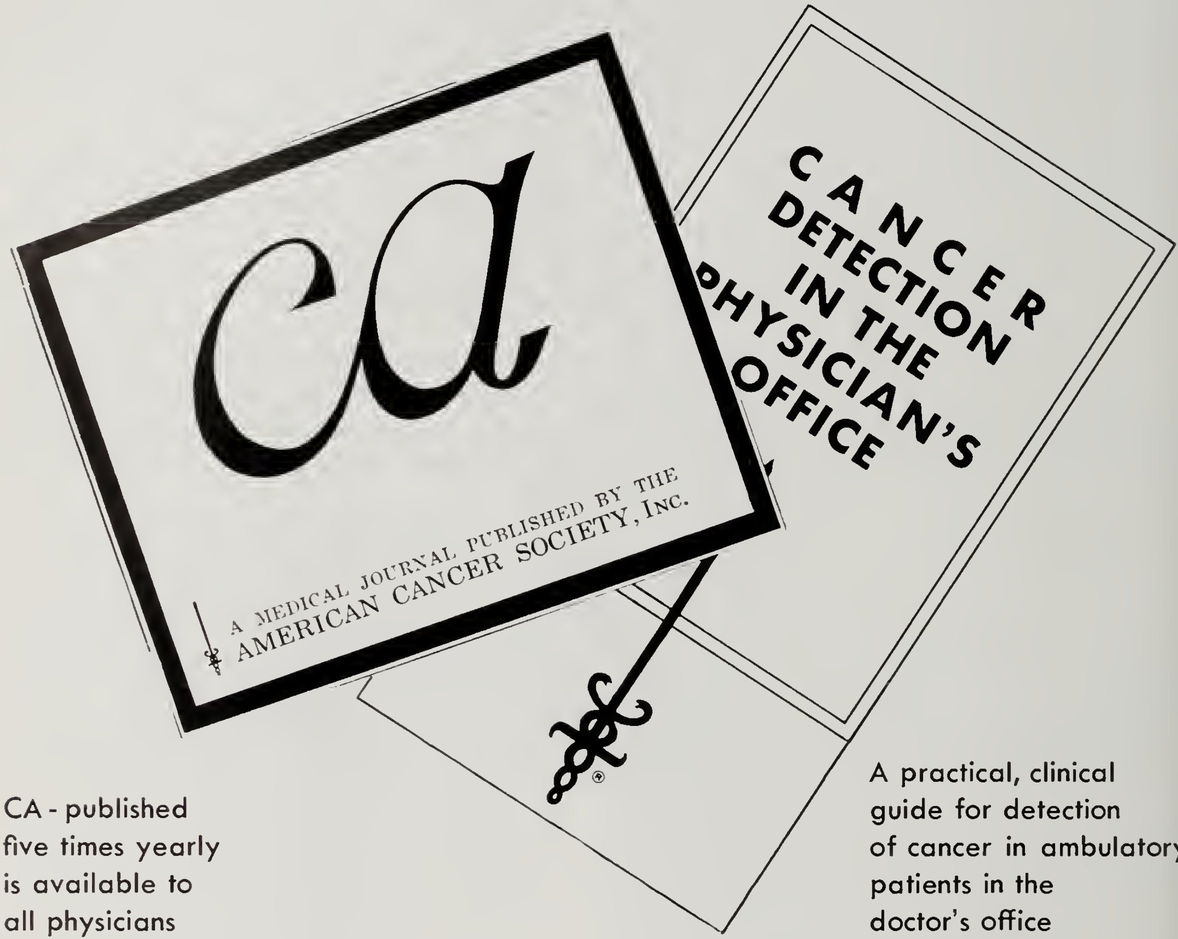
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PROPOSAL FOR EMERGENCY HOME PSYCHIATRIC CONSULTATION*

THERE IS A PRESSING NEED in the District of Columbia for some type of emergency home psychiatric service for patients unable to pay for private care. The services of psychiatrists are available to persons of limited means at hospitals and clinics. However, if a patient, due to illness, refuses to leave his home, no service is available except on a private, full-paid basis. Families finding themselves in such a crisis situation frequently contact the Association for Mental Health and other psychiatric agencies (many such calls come to the Adult Mental Health Clinic of the D. C. Department of Public Health). When help is not forthcoming from other sources, these families frequently contact the police. The police are hardly in a position to offer the expert guidance these situations call for, and, in fact, they are powerless to intervene unless the commission of crime seems probable.

It is believed that the availability of expert psychiatric advice on the spot, when a pressing emotional crisis has arisen, would in many cases provide for enough alleviation of the situation to allow the patient to continue functioning in the community. Strong support for this belief comes from the experiences of Professor Querido of Amsterdam, Holland, where such a service has been in operation for over 20 years. Professor Querido states that "one psychiatrist in this service is more effective than the whole personnel of a 50-bed ward." He finds that the availability of expert attention in the home at the time of crisis has an important stabilizing effect, not only upon the patient but upon his family and social environment. Some starts have been made toward this type of service in the United States, notably in Boston, where initial experiences are considered favorable.

In cases which cannot be handled without hospitalization against the patient's will, there presently exists the legal requirement that 2 physicians (as well as 2 laymen) must certify as to the unsound state of mind of the patient. If emergency home service were available it would be possible for low-income families to meet this requirement.

It is proposed that a program of emergency home psychiatric consultation be inaugurated in the District of Columbia. The aims of the program are: (1) to provide expert advice where required on the scene when emotional crises occur in low-income families; (2) to avoid unnecessary hospitalization of patients; and (3) to insure prompt hospitalization of patients when this is required.

The following plan of operation is envisaged for the program: A central receiving point for calls will be established in the Adult Mental Health Clinic of the D. C. Department of Public Health. Calls will be received there during regular business hours and will be handled by an experienced psychiatric social worker. Calls for service are expected to come from responsible family members, perhaps not infrequently acting on the advice of professional persons, such as nurses or social workers in contact with the family. The social worker will screen the calls to determine whether the proposed service is indicated and whether the financial status of the family is such as to make private care not available. In cases not deemed acceptable for service, the social worker will attempt to provide information relative to other resources which might be utilized. It is hoped that in time some type of 24-hour telephone contact can be arranged.

When the social worker determines that a patient is eligible and in need of home service, she will call upon one of a panel of private psychiatrists to make a home visit. This panel will be recruited from the membership of the Washington Psychiatric Society and every effort will be made to secure the services of as many qualified psychiatrists as possible for the panel. Panel members will not be asked to commit themselves to be available for service on any specific day but simply to commit themselves to accept calls from the service when feasible. Calls will go out to panel members in rotation as their names appear on the full listing of the panel. If the first panel member called notifies the social worker that it will not be feasible for him to accept the particular case, she will proceed to call the next panel member on the list. Calls to panel members for succeeding cases will begin with the first member not called for the preceding case.

The psychiatrist who accepts the call will be responsible for making a home visit to the patient as soon as feasible. Services provided will include examining the patient and conferring with the relatives. Where the psychiatrist feels that the patient can be handled without hospitalization, he will suggest suitable courses of action to the patient and the family. If hospitalization is indicated, the psychiatrist will attempt, whenever appropriate, to lead the patient to accept it on a voluntary basis. If voluntary hospitalization cannot be accomplished and the psychiatrist feels that the patient requires hospital treatment, he will complete the first medical certificate required for commitment, and he will request the family to provide the 2 resident affidavits required.

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* Developed by the District of Columbia Department of Public Health in collaboration with the Washington Psychiatric Society. Implementation authorized by D. C. Commissioner's Order No. 61-226, dated February 7, 1961.

The psychiatrist will not undertake the treatment of the patient on a continuing basis. He may, as indicated, suggest referral of the patient to a suitable physician, clinic, or other agency. Where he feels it is called for, and with the consent of the family, he may prescribe drugs as a first-aid measure, intended only to provide some temporary relief prior to the family's making arrangements for treatment.

In cases where the psychiatrist feels that commitment is necessary, and the family has agreed to provide the required resident affidavits, a second member of the panel will be requested to make a home visit to the patient. Two methods will be provided for the summoning of this second psychiatrist. First, each panel member will be provided with a list of all the other panel members, and where a panel member has seen and certified a patient referred by this service, he may call any other member of the panel who will accept the assignment to make the second visit. In the second method, appropriate when the social worker is on duty or when the emergency is not too pressing, the first psychiatrist may call the social worker of the service, who will then proceed on a rotation basis through the list of the panel to secure the services of a second psychiatrist.

The second psychiatrist will be responsible for making a home visit to the patient as soon as practical. If, after examining the patient and conferring with the family, he believes that hospitalization might be avoided, he may provide emergency counsel and help as indicated. If, as is anticipated in most cases, he concurs that hospitalization is indicated, he will complete the second medical certificate and will have the 2 certificates and affidavits delivered to the police for action in taking the patient to D. C. General Hospital.

In cases in which a family, despite means so limited as to make them eligible for this service, has already employed the services of a private physician, and that physician feels the patient requires emergency psychiatric consultation, a referral will be accepted from the physician for the services of 1 psychiatrist, who will be called by the social worker in rotation from the panel. He will furnish consultation to the private physician and, if indicated, will complete one of the certificates required for commitment.

Each psychiatrist who completes a physician's certificate on a patient will thereafter be responsible for furnishing such testimony as may be required by the Mental Health Commission; and in the few cases contested in court action he will be reponsible for testifying there also.

Each psychiatrist making a home visit will transmit to the Adult Mental Health Clinic a brief report indicating who was seen, what the findings were, and what disposition was made. The Adult Mental Health Clinic will undertake to compile the running record of experience with the service.

The fee paid to each psychiatrist will be $50.00 per home visit. There will be no additional payment should testimony later be required by the Mental Health Commission or the courts.

Membership

The following applicants for membership were duly elected to membership by the Executive Board, May 22, 1961, in accord with Chapter II, Article VIII, of the Constitution and By-laws of the Society.

Active Members

Lee W. Davis, 4912 South 25th Street, Arlington, Va.
Frank J. Fedor, 4201 Cathedral Avenue, N.W.
Norman C. Kramer, 553 Southampton Drive, Silver Spring, Md.
Parley W. Madsen, Jr., D. C. General Hospital
Cleveland E. Smith, 3300 Stanton Road, S.E.
Nicholas P. D. Smyth, George Washington University Hospital
Edward D. Soma, Georgetown University Hospital

Associate Members

Barton J. Gershen, Georgetown University Hospital
William H. Killay, 10222 Falls Road, Rockville, Md
Hans H. Schneider, 1835 Eye Street, N.W.
Gary L. Singleton, St. Elizabeths Hospital

Panel Discussion

DOCTORS AND PREPAID MEDICAL CARE

MODERATOR:

THEODORE WIPRUD

Executive Director, The Medical Society of the District of Columbia

PANELISTS:

JEROME POLLACK

Program Consultant, Social Security Department, United Automobile, Aircraft and Agricultural Implement Workers of America, AFL-CIO

TODAY, WHEN MEDICINE APPEARS in many ways to be in collision with society, it may be helpful to realize the common origins and common consequences of progress in medicine and in society as a whole.

ACKNOWLEDGMENT

This is the fourth in a series of talks given at the Forum on General Problems in Medical Practice, held at the Hotel Statler-Hilton in Washington, D. C., October 29, 1960, under the auspices of The Medical Council of the Washington Metropolitan Area. Host: Peoples Drug Stores, Inc. Reprints may be obtained upon request from the Medical Society of the District of Columbia, 1718 M Street, N.W., Washington, 6, D. C.

The industrial revolution brought to medicine the stethoscope, nitrous oxide, chloroform, ether, the galvanic cell and electric battery, the aniline dye, vast advances in optics, photography, microphotography, the X-ray, and other major innovations which enlarged the power and effectiveness of the healing arts and brought unprecedented gains in the health of people. These advances, however, were accompanied by sweeping economic and social change. Many of the benign patterns of a handicraft economy were dislodged and the insecurities of life were greatly augmented. And before the end of the nineteenth century there was a wave of social reform seeking to deal with these insecurities through new forms of public and private insurance.

Today the application of atomics, electronics, the ultravisual, the new chemistry, the new biology, and the rest of the new sciences and technology is having a cumulative and growing impact far more profound than the mere beginnings of the industrial revolution. Today, too, there are accompanying social and economic problems as deeply felt and as portentous as those of the latter nineteenth century.

The social issues that will concern America in the remainder of this century will not be whether or not to adopt the reforms promulgated by Chancellor Bismarck and Emperor Wilhelm the Second between 1883 and 1889, although the debates often sound that way. Our needs, our capacities, our preferences, our temperament will govern. Our solutions will probably be different.

The relationship between medicine and these socioeconomic forces has greatly intensified. The great advances in medicine and the attendant rise in the volume, the scope and the cost of care have made people much more concerned than ever before with measures to minimize the economic impediments to health care.

A few decades ago prepayment scarcely existed in America. Today the modern hospital could not operate without it. Nor in all probability would we be able to support the whole range of advanced private health services and supplies that now cost Americans about $19 billion a year—more than a hundred dollars for every man, woman and child—without some form of risk-sharing and advance periodic payment. Without this new method of financing, our health services, in all probability, would not have advanced as far as they have. The ability of physicians to order, and of patients to receive, good medical care, and the rising volume and advancing standards require methods of financing that are adequate and appropriate. If prepayment did not exist, someone would have to invent it. And whatever fears may have originally been entertained or may still remain about where prepayment may lead, it is becoming increasingly evident that prepayment is essential, that it is here to stay, that the only alternative would be some other social form of risk-sharing, and that it now needs to be further developed and made to work effectively in the interest of physician and patient alike.

America in the thirties was only a hairsbreadth away from national health insurance; it was averted more by accident and the approaching war than by any positive action. In the forties we were often not very far from such a program; this is when the voluntary system took hold and began to offer an alternative. In the fifties, as the voluntary system grew to serve many millions of people and to pay vast amounts of benefits (this year more than half of all private hospital care, perhaps 35 to 38 per cent of all private physicians' services), it began to get not only *de facto* recognition but some genuine support. Its importance is beyond debate. And it has demonstrated advantages of voluntarism, flexibility and adaptability that are likely to be respected regardless of whatever else may come. In recent years few proposals have been advanced to enact a general health insurance program, and even these have not been vigorously pursued.

But in gaining acceptance, the voluntary system is being held responsible for delivering adequate and definitive protection. Prepayment is being pressed by the inherent need and by the willingness of subscribers to expand its benefits considerably. This is not an excessive demand made by labor to embarass or overtax the voluntary system. On the contrary, in the last decade management was even more conspicuous in insisting on benefits beyond a few months of hospitalized illness—for a widespread extension of the scope and duration of protection. A broader range of prepayment could overcome some of the inequities that are now stimulating excessive resort to hospitalization when benefits are not available outside. It could overcome some of the inequities in the distribution of prepayment benefits among the profession. A major extension of prepayment is bound to come.

Physicians need to help devise medically-oriented new benefits that better protect the health and economic security of the people. Doctors could identify by medical criteria those small expenditures that are also medically unimportant and help relieve the burden of insuring these. On the other hand, they should encourage and indeed stimulate the insurance of small expenditures that are medically important. Medical participation is cardinal in designing appropriate prepayment of preventive care unless we wish Osler's characterization of prevention as the medicine of the future to convey a cynicism that he certainly never intended.

Refinements in the methods of paying physicians under prepayment have only just begun and are critically needed. We have seen beginnings in efforts to make the payments for one procedure bear a reasonable relationship to those for other procedures. The rigid total maximum, so commonly featured in earlier prepayment plans, was mainly a device to limit liability. The advent of new forms of surgery that need to be covered by prepayment will make the still common dollar maximum an anachronism. Greater latitude for individual consideration and better methods of paying physicians, both within the fee-for-service system and through other methods, are needed.

Many entirely natural and appropriate factors are causing the cost of health care to rise rapidly. Incidentally, the Consumer Price Index understates the increase in the cost. The Index was never intended to be used under such high magnification for health care.

If we are to preserve and advance the standards of care, it will be increasingly necessary to give the consumer an assurance that unwarranted increases are being scrupulously resisted and that unjustified elements of cost are being avoided.

There is evidence that prepayment has stimulated increased utilization of hospitals, which is exactly what it was intended to do—but in some cases beyond propriety.

There are problems in the way prepayment plans operated largely by hospitals and physicians deal with the public, whether they are giving the public adequate assurance that it is receiving value for their money.

There is some danger that public recalcitrance over cost could harm the quality of care. This is something that we must avoid by being as vigilant as possible in resisting abuse. And there are abuses that need to be corrected.

The abuses are attributable not only to the "bad apples." Those are relatively easy to deal with and the responsibility is well accepted by medicine. But there are abuses and deficiencies in the design of existing programs, especially in indemnity plans and in some of the open-ended benefits, that do stimulate the raising of fees beyond what is justified by the increasing cost of providing services and beyond a reasonable rate of increase for the physicians who are providing the care.

Laymen are not desirous of interfering in medical practice. They know their limitations all too well. Certainly the control of practice must remain in medical hands. But physicians, by using restraint, discretion and intelligence and by employing such technics as medical audits, statistical controls and various types of utilization, tissue and other committees, need to give the public confidence that its money is being respectfully regarded. Great doctors from Hippocrates on have battled often heroically to advance the ethics and quality of practice and not always to praise and defend it.

One of the stormier conflicts of just a few years ago is now fortunately becoming calm. Although we have still a long way to go, we seem to be finding a way whereby physicians who support group practice prepayment plans and those who hold to open access to all licensed practitioners can now live and work in better harmony.

The growth of dual choice is one of the most promising and important developments. By giving every subscriber an opportunity to choose either a solo practitioner or a medical group where it exists, a degree of free choice is assured.

The abatement of unfair tactics, which attempted on the one hand to annihilate the group practice plans, irrespective of their merit, and, on the other hand, to coerce people into closed panel plans, irrespective of their merit, should now give place to the natural development of both forms of practice, giving those physicians who are ready to practice in groups an opportunity to practice in this manner so that the growth of these plans can be determined by their true strength, how well they perform, how well they are able to attract supporters and to satisfy their subscribers.

On the other hand, the prospects were never better for plans sponsored by medicine, with broad participation by individual physicians. Subscribers are willing to pay prevailing and appropriate fees through prepayment. If prepayment plans are able to exercise responsible custodianship over the funds entrusted to their care and take meaningful steps to avoid abuse, plans of this type, already large in their numerical enrollment, would have an unparalleled opportunity to develop further and would receive enormous support.

If the medical profession accepts the desirability of trying to expand prepayment into a broader range of care; if it recognizes the probability that this will occur; if it accepts the need for participating and guiding such a development; if it is aware that this will require some controls, as well as a willingness to try things out, it can have a decisive impact in the long run on the nature and destiny of the practice and the economics of medicine. It would give people what they need in a form acceptable to medicine.

It was not the public relations blitzkrieg but rather the creation of an alternative that averted national health insurance legislation. Now the strengthening of that system is the strongest bid that medicine can make for the continuation of the voluntary system.

However potent the threat of averting legislation may have been in getting started and as a catalyst in provoking needed action, it is now necessary to regard the voluntary system no longer as a lesser evil but rather to work to make it a full-fledged program capable of meeting the needs of the profession and the public.

We now need new approaches for covering the uninsured. The recession of 1958 showed that health insurance is not recession-proof. There is a potential for serious attack on the voluntary system if many people should lose what they consider an essential protection.

The past decade was characterized by political conservatism and gradualism. But the pressures for improvement in the financing and distribution of health care were greater than ever. The concern over what might be done for older people who have not shared equitably in health insurance has become irrepressible. The surge of attention over health care for the aged implies a portentous conclusion. Prepayment has come to be accepted as a necessity of life and people are not ready to ignore the underinsurance and uninsurance of a segment of the population with augmented health needs.

The means are still in dispute: whether the protection should be voluntary or compulsory, whether based on assumed or demonstrated need. But the end has won bipartisan endorsement, and there is some likelihood of further legislation in this field.

There is no preordained path that health insurance must necessarily follow. Having abstained from the more common patterns abroad, there is a greater likelihood that America will continue to follow a path of its own.

As in the past we are likely to insist that demonstrated need be met. As in the past, we are likely to remain pragmatic over how this best can be accomplished.

What is ultimately at stake is the capacity of the voluntary system to perform. If it does an adequate job, no amount of theorizing that Government could do it better is likely to prevail. If it is unable to perform adequately, the most adroit exercise of public relations and political gamesmanship will not prevail.

FRANK CARBO

Chairman, District of Columbia Chapter, Health Insurance Council

New progress in helping the American public meet the cost of its health care was made in 1959 as the total number of persons with some form of voluntary health insurance reached a record of nearly 128 million. Major Medical expense protection helps pay virtually all types of hospital and medical expenses of catastrophic or prolonged illness or injury. At the end of 1959, 21,850,000 were so protected, nearly 4,500,000 more than the previous year.

The Federal Employees Health Benefits Act went into effect July 1, 1960. It is my understanding that approximately 500,000 people are protected by this program locally. This represents a tremendous increase in the amount of Major Medical insurance held by people in this area. Obviously, many of you will come into closer contact with Major Medical at a faster pace than the country generally. It is important that these plans covering Government employees remain sound and workable. A spiraling inflation of premium rates under this program could prove disastrous.

Our American health care system has the strength that only evolutionary development can impart. In this field we would do well to beware of those who, because of impatience, see in progress only signs of incompletion. Those who expect perfection here and now have failed to learn the lesson that human progress must needs be unending.

This audience needs no assurance from me of the technical excellence and high professional proficiency of medicine as it is practiced in America. Since the attacks on American medicine are primarily economic arguments, let us turn to them. It has been alleged that medicine's tenacious adherence to the principle of freedom of choice of physician is not only meaningless for many but by impeding the development of closed panel practice contributes substantially to heavier health care costs.

Why is freedom of choice of physician important? The answer is because it aligns the inherent drive of the doctor to succeed in his profession with the best interests of his patient and, therefore, the public. If the physician's patronage depends on his reputation for skillful treatment and proper attention to his patient rather than assignment under a governmental system of uniform payment, or through economic duress of a private free-payment arrangement whose benefits can only be provided by selected physicians, common sense tells us that the physician's dedication to high professional standards will be reinforced by enlightened self-interest.

In America we regard monopoly in industry as undesirable. In the provision of health care, monopoly, whether public or private, can be disastrous. It is sheer folly for those who advocate Government subsidy of the individual health care cost to assert that such financial arrangements will not interfere with private medical practice or the operation of our voluntary hospitals. He who pays the piper calls the tune.

Let's talk about some of the problems in providing medical care insurance. It is most important for us to understand that new wealth is not created out of nothing by insurance. An insurance company is actually no more than an administrative custodian of money committed to its care as coöperative protection against a risk equally shared by all participants. Each policyowner pays his own way, using a plan of his own selection according to his own means and desires.

Since indemnity and service plans adhere strictly to the principle of measurable risks, their relative inflexibility simplifies cost control. It is essential that the limitations of such plans and the reasons for such limitations be clearly understood by all concerned. A doctor who does not understand them is often offended because an insurance company does not pay him what he knows his service is worth. The patient may be upset because he thinks that the difference between the insurance benefits and the doctor's fee represents an exorbitant charge by the doctor or lack of living up to its contractual agreement on the part of the company. He thinks that his insurance, regardless of what he has paid for it, should "take care of everything," and when it does not he is sure that he has been victimized by somebody.

Insurance plans providing the broadest coverage are Comprehensive and Major Medical policies. These plans are highly susceptible to abuse. Too often the recipients of all these services, with no direct personal interest in their cost or in the actual source of the funds to pay for them, are inclined to use them when they are not actually needed, or for relatively trivial reasons. In the hope of controlling abuses, these plans seek to retain on the part of the recipient of medical care a personal interest in cost control such as the deductible and co-insurance clauses. These contracts impose no limit on professional fees beyond the stipulation that they be "customary and reasonable." This feature alone makes the plans susceptible to abuse by the medical profession itself. Currently, a number of Medical Societies are setting up review committees under existing local Medical Society machinery where unusual and exorbitant fees can be acceptably protested by the insurance carriers. Experience generally with Comprehensive and Major Medical plans has been somewhat unfavorable. Unless abuses are corrected, the premium rates for all such plans must increase. No one can afford an unrestrained inflationary trend except the Government. Even the Government, as an insurer, could restrain it only by increased taxes or by rigidly prescribed fee and price control, or both.

This is the basis for the urgent and insistent plea by the insurance industry that the existence of insurance should not be permitted to influence the fee charged by the physician. The full understanding and coöperative self-control of the medical profession is essential if this type of insurance is to remain available. The insurance industry is not interested in telling doctors what they should charge for their services; we need guide lines from the medical profession to help us construct policies that are practical and sound. Doctors have been taking a new look at medical economics and are coming up with some possible answers to this problem. One tool which is receiving a good deal of attention is the development of "relative value studies." I do not have enough time to treat this subject fully; however, I should like to explain in two short sentences what relative value studies are. The relative value principle looks at the relationship of the doctor's usual charge for one procedure to his usual charge for others which he performs. The relative value approach presumes that the ratio of the fee for one particular procedure to that for another will be about the same for most doctors, even though the actual levels of their dollar fees may differ widely.

Let's take a look at this problem from the physician's point of view. The basis for professional fees is probably the greatest single source of misunderstanding to most insurance men and laymen generally. It is difficult for them to understand why professional service is not a measurable commodity to which a specific price tag can be tied. Some medical services lend themselves better to standardized charges than others. A smallpox vaccination is about as simple a procedure one time as it is the next. A physical checkup, even a skillful and thorough one, is, in a general sense, measurable. But what of the patient in a diabetic coma or coronary thrombosis, or crushed in an automobile accident, or critically burned? How is his care to be measured? The same surgeon may perform thyroidectomies on two patients, with equal concern for the preservation of vocal-cord function, and for a generally favorable result. One patient earns his living by crying his wares, selling papers on the corner, and occupies a bed in a large ward. The other is a famous singer whose voice is priceless. He occupies the choicest private room, with the luxuries and amenities of a resort hotel. Is the same fee appropriate for both? What, then, is a reasonable fee for a doctor's service? Certainly, the complexity of the case, the degree of skill and judgment required, the time expended, and the patient's circumstances need to be considered. With a few unworthy exceptions, most doctors adhere strictly to a pattern of reasonable upper-limit fees, and an average range. Whenever the circumstances really warrant it, they are glad to reduce or forego the fee entirely.

The field of medical economics is a complex one and certainly one that cannot be solved overnight. Certainly, one will not solve them by simply pretending that they do not exist. I believe that controlled free enterprise, the profit motive, and competition are as much in the public interest when applied to doctors as they are when applied to any segment of the economy. I believe that by working with the insurance industry doctors can help stem the tide toward paternalism and a welfare state. When the means actually do not exist, they will continue, as they always have, to give their services for less than their actual value, or for nothing. I believe that they recognize their imperfections and shortcomings, and they know that the unscrupulous few among them have tended to give a bad name to them all. I, as well as they, do not think that this is a reason to destroy a whole edifice, which, imperfect though it may be, has been built in the interest of humanity.

Good working relationships have now been established between the insurance industry, operating through the Health Insurance Council, and organized medicine at all levels—national, state, and county. Those of us engaged in the insurance business have been impressed with not only the willingness of the medical profession's leadership to work with us but also its insight into our problems. The development of these relationships has brought into focus the fundamentals that bind free medicine and insurance together. Further, we must give the public a better understanding of the whys and wherefores of medical costs. In most things, the average man has some basis for comparison. He knows, roughly at least, what he will have to pay for things he wants. He can choose the expenditure that will bring him the most gratification, and can bargain with those who purvey it. None of this is true, in any practical sense, of medical care. Few people know what charges to expect. The patient cannot choose between medical care and something else. He cannot bargain. Translated into health insurance operations, this means the insurance-buying public is without satisfactory guides for determining the kind and amount of protection it needs for judging the equity of either medical fees or insurance premiums.

There is not much question whether we want to work together. We must. The question is whether we have time. As Dr. Gunnar Gundersen put it not too long ago, "Now is the time for action, for in two years it may be too late for the private practice of medicine and the system of voluntary personal insurance."

CHARLES G. HAYDEN, M.D.

Executive Director, Massachusetts Medical Service

As indicated to some extent by the composition of this panel, there are today 3 major groups in this country engaged in providing protection against the cost of medical care on a voluntary basis. These are:

1. Group practice prepayment plans with salaried staffs which, to a greater or lesser degree, offer so-called "comprehensive" benefits. In this category are plans such as the Health Insurance Plan of Greater New York, the Kaiser Foundation Health Plans on the West Coast, the United Mine Workers' program in West Virginia and elsewhere, and the Group Health Association here in the District of Columbia.
2. Private insurance company plans, which today are featuring "comprehensive" and "supplemental" Major Medical coverage.
3. Blue Cross and Blue Shield Plans.

Group Practice Prepayment Plans

Group practice prepayment plans have been in existence for many years. Among the earliest were Dr. Shadid's plan in Elk City, Oklahoma, the Ross-Loos Clinic in Los Angeles, California, and the Labor Health Institute in Saint Louis, Missouri. A number of similar small plans, sponsored usually by coöperatives, are now scattered through the Middle West and Upper West Coast.

The Kaiser-Permanente Plan came into being during World War II to take care of Kaiser employees. The Health Insurance Plan of Greater New York was organized as a community-wide project at the end of the war. It was sponsored by Mayor LaGuardia who considered it to be a prototype of Federal compulsory health insurance. The United Mine Workers' program, as you know, came into being somewhat later to fill a special need.

Up to the present, an outstanding characteristic of group practice plans has been their lack of growth. One reason for this may be that many of them serve a limited clientele without which they would find it hard to survive. In New York City, for instance, most of the municipal employees must take H.I.P. or lose the city's contribution. Another factor may be their generally high premium rates, which require substantial employer contribution.

However, the past is not the future. Therefore, I would call your attention to the Community Health Association now being organized in Michigan with the support of the United Auto Workers and to the emphasis recently placed upon similar proposals by the United Steel Workers and other union groups. If these efforts materialize and become successful on a community-wide basis, the effect upon the practice of medicine as we know it could be considerable.

PRIVATE INSURANCE COMPANY PLANS

The Major Medical offerings of private insurance companies are designed in part to compete with Blue Shield service benefits. They are inflationary, and, in my opinion at least, contain the seeds of their own destruction. With a 10- or 15-thousand dollar maximum benefit to draw upon, patients do not take kindly to paying 20 per cent of their doctors' customary charges. Obviously, such an attitude can have serious consequences. Physicians are not anxious either to sue patients or to subsidize insurance companies. Yet, if they raise their customary charges to cover the deficit, they vitiate one of the basic concepts of Major Medical coverage (co-insurance) and subject themselves to criticism. The obvious answer to this problem is for the insurance companies to pay 100 per cent of reasonable charges to the physician and then seek reimbursement in the amount of 20 per cent from the patient. Such an arrangement would not only remove the burden of double billing from the physician but it would also permit the insurance companies to make full use of the coinsurance principle, which is one of the 2 major concepts upon which Major Medical coverage is predicated, the other being the deductible.

I doubt that many people in this country expect private insurance companies to solve the problem of paying for medical care. This is not to say that private insurance companies have not or are not now making a significant contribution in areas where Blue Cross and, more particularly, Blue Shield are delinquent. It is just that private insurance companies must seek business that is apt to produce a profit, and in doing so they create a public image greatly different from that of Blue Cross and Blue Shield.

BLUE CROSS-BLUE SHIELD PLANS

In 1959 Massachusetts Blue Cross-Blue Shield engaged National Field Service, an affiliate of Alfred Politz Research, Inc., of New York, to make a survey. The universe sampled was the adult population of Massachusetts 19 years of age and older. Single interviews were made with a total of 1,885 persons. One of the questions had to do with the ultimate solution of the problem of paying for medical care. The answers came out like this:

1. Eighty per cent of those covered by Blue Cross-Blue Shield favored Blue Cross-Blue Shield as the ultimate solution.
2. Thirty per cent of those with commercial insurance also favored Blue Cross-Blue Shield.
3. Forty per cent of those with no insurance at all favored Blue Cross-Blue Shield.
4. Only 12.6 per cent of the total favored a Government-operated plan.

On the basis of these and other data National Field Service had this to say:

"Blue Cross and Blue Shield are closely associated with other nonprofit, public service organizations. We believe that as a result of this the standards by which Blue Cross-Blue Shield coverage and rates are judged are not the same as those used to judge, say, a Buick and its sales price. We suspect that there is a tendency for persons to shift, when appraising Blue Cross-Blue Shield coverage and rates, from the purely *quid pro quo* terms which apply to the purchases of ordinary consumer goods and services to terms which are appropriate to Government-operated public services such as schools and police protection. The automatic payroll deductions for Blue Cross-Blue Shield may, in fact, be dimly seen as a sort of 'tax.'

"It would seem to follow from this that the more Blue Cross and Blue Shield are regarded as public service in character, the more it is likely that they will be held responsible for the solution of the basic social problem of providing good medical and hospital care for all who need it at a cost which is not too burdensome. This challenge may well prove to be the price which Blue Cross and Blue Shield must pay for having developed the superb public image they now possess."

I would remind you that this is the image of Blue Cross-Blue Shield in Massachusetts where Blue Shield provides service benefits with a family income limit of $7,500 and where Blue Cross and Blue Shield, jointly, have been offering extended benefit coverage since 1954. It may well be that in certain other areas of the country the Blue Cross-Blue Shield image is less favorable.

Current criticism of Blue Shield Plans from outside the medical profession runs something like this:

1. Many Blue Shield plans either do not provide service benefits or have income limits that are outmoded.

Actually 60 of the 74 Blue Shield plans in the United States and Canada provide service benefits, and of these 49 (covering 76 per cent of all Blue Shield members) have income limits of $6,000 or more. A decade ago only 44 plans provided service benefits.

All of the early Blue Shield plans—California, Michigan, Buffalo, New Jersey and Massachusetts—recognized the necessity of providing service benefits. At that time Federal compulsory health insurance was a vital threat to the free practice of medicine and the men who organized these plans knew it. Subsequently, the threat waned and with it the urgency for service benefits.

Although criticism of Blue Shield from within the medical profession takes many forms, 98 per cent of it stems from an intense animosity toward service benefits. How this animosity can be overcome, I do not know. What I do know, however, is that one way or another the people of this country are going to get service benefits with reasonably high income limits. Only in this way can they be sure of what they are buying. For my part, I would prefer that they get their service benefits through Blue Shield plans on a fee-for-service basis with free choice of physician rather than through closed panel plans or via Government.

2. Few, if any, Blue Shield plans (and Blue Cross plans as well) have taken adequate measures to analyze and, if necessary, control the utilization of benefits.

Although I have yet to meet a patient who would agree that the services rendered in his case were unnecessary, I am fully aware of what can happen under a program that permits free choice of physician and uses the fee-for-service method of payment.

Two years ago, at the request of the Blue Shield Board of Directors, the Massachusetts Medical Society established a Committee to Review the Utilization of Blue Shield Benefits. This Committee, in turn, engaged the services of a nationally known research firm which developed a number of statistical technics designed to expose what for our purposes may be called deviations from the usual. These technics are being programmed for our electronic data processing equipment so that in due time we will have periodic reports on the Blue Shield activities of all of our 7,500 participating physicians and participating dentists.

Incidentally, this Committee has since become a permanent Committee on Medical Charges to Pooled Funds which deals not only with Blue Shield but with Blue Cross and the State Health Insurance Council as well.

In addition to the Committee's undertaking, the Health Information Foundation of New York City is currently engaged in an evaluation of why people go to the hospital in Massachusetts and what happens to them when they get there.

Perhaps we have been tardy, but at least we should know before long whether or not Blue Cross and Blue Shield are being abused by physicians, patients, or both, or by their critics.

3. The range of benefits provided by Blue Shield, or more correctly, by Blue Cross and Blue Shield together, is still inadequate.

Today, some 35 Blue Shield plans are offering some type of extended benefit coverage and it is a good guess that most of the remainder will be doing the same within the near future.

Once the charge of abuse has been examined and, if necessary, dealt with properly, the only limit to the scope of benefits that Blue Cross and Blue Shield plans can provide will be the amount of money that the public may wish to devote to personal health services.

4. The local autonomy of Blue Shield (and Blue Cross) plans interferes with the enrollment and servicing of national accounts.

With this criticism I agree completely. It's about time that we in Blue Shield came to recognize that a steelworker in Pittsburgh, an autoworker in Detroit, or an electrical worker in Schenectady is no different from his fellow-workers in Ohio, Indiana, Illinois, Massachusetts or California.

It is my fervent hope that the recently inaugurated plan for Federal employees, which involves a high degree of uniformity Nation-wide, will at last have broken this barrier.

5. There is not enough lay representation—meaning, in most instances, labor representation—on Blue Cross and Blue Shield Boards of Directors.

Since our Blue Shield Board in Massachusetts has always been composed of one-third physicians and two-thirds nonphysicians, and since the Blue Cross Board in Massachusetts is required by law to have labor representation, I am not in a position to argue the merits or demerits of this contention. All I can say is that we get along very well in Massachusetts.

I hope that it is clear from the foregoing:

1. That I am a staunch supporter of the private practice of medicine on a fee-for-service basis with free choice of physician.

2. That I consider group practice prepayment plans now being advocated by well-organized and well-financed sponsors to be the most potent immediate threat to the private practice of medicine.

3. That I consider Blue Shield plans to be the only logical answer to this or any other similar kind of threat provided, however, they all make service benefits available with reasonably high income limits; they all take immediate steps to analyze, and, if necessary, control the utilization of benefits; they all expand their scope of benefits in concert with public demand and public willingness to bear the increased cost; and they all coördinate their best efforts to the end that they are able to offer programs satisfactory to national accounts.

QUESTIONS AND ANSWERS

Q: Are you convinced that voluntary health insurance, if sufficiently expanded, can meet the demands of the American people?

Mr. Pollack: We now have a system that was entered into with great reluctance by many physicians and some insurers. It has made much progress, but so far it has not attained adequacy in meeting the reasonable and demonstrable needs of people for health protection. That is the largest threat to the voluntary system.

There should be no mistake about the fact that in spite of its unexpected growth and the $5 billion benefits that health insurance is paying now, it still pays only some 25 per cent of the total national private health bill. We have some way to go before ultimate judgment can be made as to whether the voluntary system will do the job.

The voluntary system has to embrace within itself some very different motivations, including the needs of consumers for more protection and more attention in policy-making. Consumers have a right to criticize. The problem is not so much with the critics as with the inherent shortcomings. The voluntary system needs a variety of plans, including group practice plans (which I didn't have enough opportunity to praise adequately and to hope that they too get a free opportunity to develop). The independent group practice plans are a part of the voluntary system—one of its important growing manifestations.

With respect to the aged, we probably are headed for a split-level system of public and private insurance. With the bipartisan endorsement of some further legislation for the aged, the chances are there will be some action in this field.

The voluntary system can have a great future. It can do well and preserve a large amount of the voluntarism that physicians want, and that consumers may also join you in wanting, if it is responsive to their needs.

Q: Does this represent the views of your associates?

Mr. Pollack: I believe so. In the past, my associates have been among those who have strongly recommended that there be a universal governmental program.

Now, however, they buy vast amounts of health insurance under the existing voluntary system. They are working with it and are trying to perfect it.

Labor is not standing apart to say, "I told you so. It can't work." That would be an irresponsible attitude to take in face of the overriding need for timely protection.

At the same time, our associates have reservations about how far the voluntary system will go toward overcoming its limitations and providing meaningful protection in our time.*

Q: Do you feel that physicians generally are aware of the vital necessity of supporting voluntary health insurance?

Dr. Hayden: I think that today physicians generally are aware of the necessity to support voluntary health insurance but I also think that many of them don't really know why they feel the way they do. The problem is one of communication and education. Too few physicians will take the time to read what we send them or to explore the issues at meetings such as we are having here today. Most of them just take voluntary prepayment for granted and are opposed to what is called either compulsory health insurance or socialized medicine.

Q: What long-range effect do you feel the enactment of Federal Employees Health Benefit Law will have on Blue Shield plans and those plans with the commercial insurance carriers?

Mr. Carbo: I would hesitate to say how this program would affect Blue Cross-Blue Shield or the commercial carriers; however, it could well set a pattern of benefits for the remainder of the country. This program blanketed about 5,200,000 people, and is bound to have some effect in molding future coverage patterns.

It would be well to point out that the Government Employees Health Benefits Act will be responsible for approximately 20 per cent of increase in the number of people covered by Major Medical plans in 1960. Further, I feel that Major Medical and comprehensive types of coverages will provide the protection that the public needs and wants. Basic hospital plans provide limited first-dollar coverages, including limited surgical coverage, as well as in-hospital medical visits. Nurses' costs in or out of the hospital, drugs and medicines, and doctors' visits in or out of the hospital usually are included in Major Medical plans only.

I think that the present system of insuring Government employees is workable and undoubtedly will help set a pattern for the future. I hope so."

Q: What significance do you think the Federal Employees Benefits Program will have so far as the Government inroads on medicine are concerned?

Mr. Carbo: I think that this program gives everyone a good opportunity to see voluntary insurance in action. There are some 40-odd different plans competing for this business, and this competition will produce even better plans in the future.

Q: How important do you consider the free choice of physician principle in voluntary health insurance?

Mr. Pollack: There is a division of opinion within labor over the free choice of physician.

Some have reacted negatively to what they regard as overstressing free choice as the principal or sole criterion for quality.

Quality is not only a matter of choice. Many individuals are unable to exercise an informed or intelligent choice of physician. As a result, some in labor have felt that it is much more important to establish an organization that provides care directly and seeks to assure quality by screening the qualifications of the physicians who provide the care, by employing quality audit procedures, by insisting that only accredited hospitals are paid through prepayment, and so forth.

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* To amplify his answer, Mr. Pollack subsequently submitted the following excerpt from the resolution on Health Security adopted by the 17th Constitutional Convention of the UAW, October 9–16, 1959: "We will continue in good faith to work with and through private voluntary health insurance organizations. . . . We offer full coöperation to the private programs to assure that they will have maximum opportunity to demonstrate their ability to provide the kind of health protection that the peoples of both nations (the United States and Canada) can and should have."

On the other hand, there are some in labor who believe that the ability of the person to have a choice among physicians is desirable. The UAW may be counted among those favoring the "dual choice" that I mentioned earlier. Under dual choice every family is assured the right to choose a solo practitioner or a panel. That is free choice, and we think it is a very desirable form of free choice. Choosing a panel is just as deliberate, and sometimes more deliberate, than the choice of an individual physician.

If such great stress continues to be laid on free choice, it would be well to educate the people to be better able to choose knowledgeably among physicians.

It is very important to have a tolerant attitude toward plans that do have closed panels and are struggling against considerable odds to provide the best medicine that they can.

Dr. Hayden: I hope no one got the impression that I am opposed to group practice plans because I am not. What I object to is the manner in which large groups of people have been captured by such plans more or less against their will. Fortunately, this practice may be coming to an end. As I understand it, auto workers in Michigan will not be compelled to join the Community Health Association but will have free choice among C.H.A., Blue Cross-Blue Shield, and private insurance carriers. In the face of this kind of development, physicians who want to maintain fee-for-service and free choice of physician will have to get on the ball and back their local Blue Shield plans.

Q: What limits to the scope of coverage and benefits do you think can be developed by prepaid health insurance so that the average subscriber can pay for them? In other words, what is the maximum premium that a subscriber can afford to pay?

Dr. Hayden: As I intimated in my talk, I think the problem is to define and circumscribe the areas of abuse. When this is done and proper remedial action instituted, there is no limit to the scope of benefits that can be provided under Blue Cross and Blue Shield. Blue Shield Plan B in Massachusetts, which has a $7,500 family income limit, costs $57.00 per family per year. The Health Insurance Plan of Greater New York, which does not provide hospitalization benefits either, costs about $128.00 per family per year.

As I have said many times before in public and will say again here, if we could get $128.00 per family per year in Massachusetts we could give everything that H.I.P. gives and do it on a fee-for-service basis with free choice of physician.

Mr. Pollack: I would like to add that, first, I do not think that there are predetermined upper limits as to how far we can go in prepaying health care. Rather, the limits of health insurance will probably be determined by experience.

Moreover, the upper limits are hardly a pressing problem today. As I mentioned earlier, with a majority of the people insured, only about 25 per cent of the total private health care bill is paid. Even if we limit our attention to those who have insurance, perhaps only a third of their total health bill is prepaid. I have many times asserted—and no one has ever challenged this—that we certainly could and probably should increase the depth of insurance and go from one-third to two-thirds without straining the upper limits of insurability. Moreover, we most likely will do this within the reasonable future and in the process find out which elements of health care can, and which cannot, be insured, to what degree they can be covered, and what steps are needed to advance the insurability of each segment of health care.

Moreover, while I don't want to overstress the question of abuse, I must react to the notion that it is just a "bogey." Under such comprehensive service programs as the Kaiser Foundation Health Plan, the number of days of hospitalization is running around 685 per thousand people per year. This compares with 12 and 13 hundred days of hospital care and even more in some Blue Cross plans. It is not necessary to accept the Kaiser experience as normative. But after allowing for population differences and all other explainable factors, there still appears to be some excessive utilization in the Blue Cross experience. This is confirmed in studies made under reputable auspices revealing overlong stay and some unnecessary admissions. With hospitalization costing $31 a day, faulty use of the hospital needs to be corrected within the bounds of reason and good practice.

Nor can I overstress how important it is to give the consumer real assurance that he is getting fair value for his money. He does not always have that under indemnity plans, nor in Major Medical insurance. This year I spent several months trying to clean up the mess in one insurance plan where, within 3 months after eliminating a fee schedule, the average surgical fee, which was already high, went up 17 per cent. The Company claimed that it was spending nearly $2 million a year in unexpected additional premiums as a result of serious abuse of all kinds. Coinsurance and deductible clauses under this policy did not prevent the abuses. What was needed was medical controls and responsible Medical Society action.

Q: Do you want to comment on the maximum fee for premiums?

Mr. Carbo: Well, this is a very difficult question to answer. My personal observation is that the average premium today for a family is about $15.00 per month. The Government Employees Program runs between $18.00 and $20.00 for the most popular plans. However, I must say that only when there are more specific guide lines from the medical profession will the insurance carriers be in a position to construct policies that will have a comparatively stable premium structure.

We made a survey of claims paid under our School Accident Insurance Programs last year. The purpose of the survey was to determine what our losses would have been if doctors in this area had been reimbursed according to the Medicare schedules. We discovered that our paid claims would have been more if we had used the Medicare schedule as a guide. This is a compliment to doctors in this area. In other words, most doctors' fees were in line with or below the Medicare schedule. With good guide lines we can devise protection that will do the job of providing adequate benefits with premiums within the reach of most people.

Q: One of the medical leaders of a generation ago vigorously opposed voluntary health insurance plans, stating that their espousal by the medical profession was a great mistake. His point was that the voluntary system inevitably leads to a compulsory system.

Dr. Hayden: This seems to me to be a sort of "you're dead if you do" and "you're dead if you don't" attitude.

Certainly if it hadn't been for the development of voluntary prepayment plans, beginning in the late thirties, we would have had a compulsory system in this country without any question.

To develop this a little further, we have in this country a unique situation in Blue Cross and Blue Shield. Never before in history have physicians and hospitals set up prepayment programs of their own without the interposition of intermediaries. In other words, here we have the two basic sources of medical care setting up their own programs to make their services available directly to the public.

In all the foreign programs that we know about there has always been an intermediary such as a friendly society or guild between the sources of medical care and the beneficiaries. With such arrangements it was not difficult for government to take over.

I'm not worried about Federal compulsory health insurance at the present time. Should we have another bad depression, I don't know what would happen. But I do recall selling Blue Cross to W.P.A. workers during my summer vacations while a student at the University of Minnesota, and we should never forget that Blue Cross was born out of the depression in the thirties.

Mr. Pollack: Well, in the same period when the unions were pressing vigorously and ardently for a national health program, the American Medical Association adopted a report which, speaking of voluntary hospitalization prepayment then getting started, said that sooner or later prepayment would spread to medical care and result in an inevitable deterioration of quality. Prepayment has spread into medical care, but there has not been an inevitable deterioration of quality.

Quite the contrary, in avoiding any possible interference with medical practice, the voluntary system has not done nearly enough to assure the quality of care. Free choice alone does not provide this assurance.

The experience of the United Mine Workers should be carefully studied. The Mine Workers started out with free choice and found that that did not produce an acceptable quality of care.

I have one comment on the question whether a voluntary system inevitably leads to a compulsory program. People need health insurance. It is not optional; it is essential. In one way or another, they are going to have it. If people want and need more health insurance, the question before medicine is whether it would be in a stronger position with a low level of insurance that many feel to be inadequate or by supporting the strongest possible voluntary system.

MR. CARBO: I disagree with Dr. Hayden. I am worried about the legislative situation to the extent that when Congress reconvenes we may get a Forand-type coverage under the Social Security program for the aged. I have never seen any compulsory scheme of this type that didn't tend to progress like a creeping cancer. For example, a disability provision was added to the Social Security Act several years ago providing payments for disability after the age of 50. The last Congress removed the age 50 requirement; now this benefit is available to all ages. This same situation would prevail as far as medical care for the aged is concerned. Periodically, the age when benefits would be payable would be lowered, and benefits would be expanded.

MR. POLLACK: I don't want to carry this into a debate, but I think that I must comment further on some of the observations that have been made.

We in labor have gone through many negotiations in which we tried vigorously to get voluntary health insurance protection for retired people with company contributions toward some of the cost. Even this year, with all of the attention on health insurance for the aged, one would imagine that no management would let a union get out of negotiations without providing some protection for the retired. Yet even this year, in major negotiations in the aircraft industry, with only a single exception, we again failed to get management contributions to cover the retired who remain uninsured.

This suggests perhaps that some of the projections of how easily and how quickly all of the aged who need and want insurance will be covered may rest on rather questionable statistics and unwarranted assumptions.

Physicians have feared that Social Security protection of the aged would be a camel's nose under the tent—a foreign obsession in a country with so few tents and even fewer camels. What is involved is a split-level system, and that is a very common feature on the American scene. We have split-level pensions provided under Social Security and private pension plans. Neither the public nor the private pensions have destroyed the other.

In unemployment we have private supplementation of governmental unemployment benefits.

When disability retirement benefits were unavailable through Social Security, they were provided successfully through private pension plans. These benefits did not hurt the physicians and certainly helped the people. Ultimately, they were also provided by Government, and thus again we have split-level protection for long-term disability.

We have a great many other forms of split-level security in our country. I believe that this reflects a revealing American trait. We don't like to put all our eggs in one basket. In striving for security, we are disposed to try a variety of measures, some voluntary and some governmental.

DR. HAYDEN: We have been having discussions with the Department of Welfare in Massachusetts concerning implementation of the Mills-Kerr Bill and there is a bill before the Massachusetts legislature which will make it possible for Massachusetts to take advantage of its provisions.

I recall that when I was a small boy in Wisconsin the old folks used to talk about taking their pension when they got to be 65. I lived in a railroad town and some of the men did get pensions, but what most of the old folks were talking about without knowing it was public assistance. For most of these old folks there was no stigma attached to taking this sort of pension, and I suspect that if the Mills-Kerr law is properly implemented, much the same feeling will prevail among the medically indigent whose incomes are within the established ranges.

In other words, it is my feeling that proper implementation of the Mills-Kerr Bill will make the compulsory Social Security approach unnecessary.

"HEALTH-U.S.A." AWARDS TO DR. SHANNON AND DR. WALSH

Two Washington physicians were recognized as "Statesmen of Health" at the Fourth "Health-U.S.A." Luncheon, held in the Grand Ballroom of the Mayflower Hotel, May 2, under the sponsorship of the Metropolitan Washington Board of Trade and the Medical Society of the District of Columbia. These "statesmen" were Dr. James A. Shannon, Director of the National Institutes of Health, and Dr. William B. Walsh, founder and President of Project "Hope," an activity of the People-to-People Health Foundation, Inc.

The Ballroom of the Mayflower was filled with a distinguished assembly, including members of the White House staff, the President's Cabinet, members of Congress from the House and Senate, and leaders in the fields of health and medical education and allied professions and industries.

Dr. Oscar B. Hunter, Jr., General Chairman of the Awards Committee, opened the meeting by introducing the guests at the speakers' table. Mr. Julius N. Cahn, Past General Chairman, gave a brief explanation of the reason for such a gathering, which he called "a meaningful tribute to those who have served the family of man." The principal address was given by the Honorable Boisfeuillet Jones, Special Assistant to the Secretary (Health and Medical Affairs), Department of Health, Education, and Welfare. Mr. Jones paid tribute to the leadership of Dr. Shannon in the prevention and cure of disease through his directorship of the National Institutes of Health. Referring to Dr. Walsh, he praised his sharing with others, outside this country, the same facilities for the prevention and treatment of diseases that we enjoy in this country. "His imaginative leadership has extended beyond our shores the benefits that we have found."

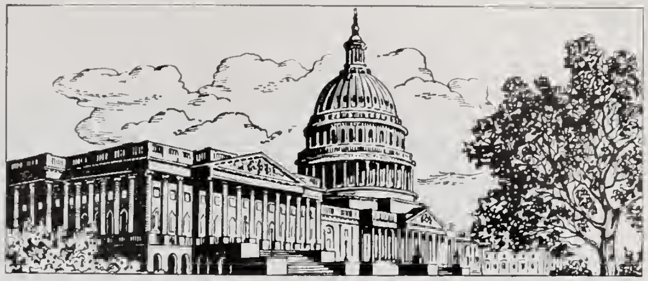
Dr. Janet Travell, Personal Physician to President Kennedy, with the assistance of Dr. Donald Stubbs, President of the D. C. Medical Society, and Mr. John C. Pyles, Jr., President of the Metropolitan Washington Board of Trade, presented Dr. Shannon and Dr. Walsh with the 1961 "Health-U.S.A." plaques. Dr. Shannon expressed his appreciation in behalf of his sponsoring agencies, specifically the National Institutes of Health. Dr. Walsh accepted the honor "with a deep sense of humility," because the award, he said, was made not only to him but to hundreds and even thousands of people who have given support to Project "Hope."

CITATIONS FOR DRS. SHANNON AND WALSH

Dr. Janet Travell, Physician to President Kennedy, has just awarded the "Health-U.S.A." plaques to Dr. James A. Shannon (left) and to Dr. William B. Walsh at the Luncheon in their honor at the Mayflower Hotel, May 2.

Dr. Walsh took the opportunity to express his appreciation to Dr. Paul R. Wilner, who has taken care of his patients during his absences, and to the late Dr. Elmer Hess, of Erie, Pa., who gave him in abundance encouragement and support. Dr. Walsh also paid homage to the American pharmaceutical industry, whose contribution has amounted to over $1,000,000 for this project alone. He also publicly acknowledged his debt to the American President Lines, which offered to operate the ship before it really had been acquired. "Selling America to the world is the job of its citizens, not the Government alone, through a vehicle which has no politics attached to it." Over 15,000 patients, he said, have been served in 7 months, with only 3 deaths. We do not need to build buildings in these underdeveloped countries, he explained, but they need a staff who can teach and minister.

In his concluding remarks, Dr. Hunter read a telegram from President Kennedy which praised the recipients as "two of the leading citizens of the Washington Metropolitan Area, the Nation and the world."



NEWS & PERSONALS

General News

The Executive Board of the Medical Society of the District of Columbia met in the Medical Society's building, May 22. Presiding was the Chairman, Dr. James W. Watts.

In a memorandum to Executive Secretaries of the State Medical Associations, Dr. F. J. L. Blasingame, Executive Vice President of the American Medical Association, requested nominations for the General Practitioner of the Year, to be named at the Clinical Meeting of the AMA in Denver, November 27–30. The Board voted to recommend for consideration as the 1961 General Practitioner of the Year Dr. R. Lee Spire and Dr. Edgar Snowden, both Life members of the Society.

In accord with the recommendation of the Committee on Public Information and Education, the Board approved the Committee's nomination of District Commissioner Walter N. Tobriner as recipient of the John Benjamin Nichols Award for 1961. The Daughters of Charity, St. Vincent de Paul, was also highly favored for the Award but did not qualify according to the rules governing the selection of recipients. The Committee was unanimously in favor of recognizing the Daughters of Charity, because of their dedicated service throughout the 100-year history of Providence Hospital, with a special certificate of commendation. This recommendation was approved by the Board.

The name of Dr. William H. Ferguson was submitted by President Stubbs to succeed Dr. Henry D. Ecker as Chairman of the Committee on Insurance. The Board approved the appointment.

Dr. John W. Latimer, Jr., was reëlected **President of the Washington Heart Association** for another term at its Annual Meeting, June 7, in the D. C. Medical Society's Library. Also reëlected to office were the Honorable Hyde Gillette, Vice President; Dr. Henry D. Ecker, Secretary; Mr. Kenneth Birgfeld, Treasurer; Mr. William C. Coe, Assistant Treasurer; and Mrs. Bernard J. Walsh, Liaison Officer.

Reëlected to the Board of Directors for 1961–62 were Mr. Birgfeld, Mr. Gillette, Mrs. Walsh, Mr. Howard W. Kacy, and Drs. Clayton B. Ethridge, Thomas W. Mattingly, Andrew G. Prandoni, John A. Reisinger and George E. Schreiner. New electees to the Board were Mr. Paul McDonald, Director of Administrative Services, Treasury Department; Mr. Mark Evans, Vice President, Metropolitan Broadcasting, Inc.; Mr. Curtis S. Steuart, President, Steuart Petroleum Company; and Mr. Joseph Z. Lins, Columbia Typographical Union No. 101.

Among those cited for special services to the Association by Dr. Ethridge, Chairman of the Awards Committee, were:

Dr. William L. Howell, the Distinguished Service Award, in recognition of his term as President of the Association, 1959–60.

Dr. Prandoni, the Service Recognition Award, for his leadership in the development of the High School Heart Research Program, one of the more important projects of the Association.

Dr. John W. DuChez, the Service Recognition Award, for his services to the Cardiac Work Classification Unit and the Rehabilitation Service.

The Junior League of Washington received the Distinguished Achievement Award, a special recognition for over 25 years of service to the Association, during which hundreds of Junior League members have given to cardiac children their time and skills through the "In-Bed Club" and later the "Happy Hearts Club" and Magazine.

Mr. Robert Ramspeck, the 1961 Campaign Report Chairman, stated that by the end of the fiscal year, June 30, he expected the total amount raised during the campaign would total something over $273,000.00, the largest amount ever raised.

The Georgetown University School of Medicine, under a grant received from the National Institute of Mental Health, will have a **3-year residency program in psychiatry** available for 1 qualified physician who is currently in general practice or in some specialty other than psychiatry. The program offers a yearly grant of $12,000 during each of the 3 years of residency, starting July 1, 1962.

To be eligible a physician must be a graduate of an approved medical school and must have practiced 4 years following internship.

Applications are to be submitted on or before August 1 to Dr. Richard A. Steinbach, Georgetown University Medical Center.

Completion of the new Sibley Hospital was celebrated with a dinner at the Army & Navy Town Club, April 20. The dinner was sponsored jointly by the Sibley Hospital Alumni Association and the Hahnemann Hospital Alumni Association, with Dr. John Murphy and Dr. Everett J. Gordon acting as co-chairmen. Present were 135 physicians and guests. Captain E. E. Hedblom, M.C., U.S.N., delivered an illustrated lecture on "Medicine and Survival in the Antarctic."

Dr. John Orem, President of Sibley Hospital, told the guests that the new Hospital was expected to begin operation on June 1. However, the transfer of patients was made 2 days earlier, on Memorial Day, May 30, when 75 patients were moved in 2 hours from the old Hospital on North Capitol and Pierce Streets to the new buildings on Loughboro Road and Dalecarlia Parkway, N.W.

Dr. Janet Travell, Personal Physician to President Kennedy, received an honorary degree from the Women's Medical College of Pennsylvania at commencement exercises, June 13, in Philadelphia.

Dr. Harry S. Gear is the new **Secretary General of the World Medical Association.** Formerly Director of Pneumoconiosis Research, Council for Scientific and Industrial Research-Industrial Medicine in Johannesburg, South Africa, he received his education at the Universities of Witwatersrand and London. He is recognized internationally as a medical leader in the field of hygiene and tropical medicine.

The Washington Academy of Surgery has elected the following officers for the coming year:

Dr. Garnet W. Ault, *President*; Dr. Saul Schwartzbach, *Vice President*; Dr. Brooks G. Brown, *Secretary-Treasurer*; and Dr. Frank J. Sanzaro, *Assistant Secretary*.

Drs. John H. Bayly, G. Edwin McNamara, John C. Murphy, and J. Rogers Young will serve on the Executive Council.

The District of Columbia Chapter of the American Academy of General Practice held an election of officers in the Medical Society's Library, June 6. The new officers are:

Dr. Ernest H. Aschenbach, *President*; Dr. W. Robert Perkins, *Vice President*; Dr. Russell M. Tilley, *Secretary*; and Dr. Millard F. Ottman, *Treasurer*.

Mrs. George W. Ware is the new President of the **District of Columbia Woman's Auxiliary to the Southern Medical Association.** Other officers and committee chairmen who will serve during 1961–62 are:

President-elect: Mrs. Francis J. O'Bryan
Vice President: Mrs. O. B. Hunter, Jr.
Secretary: Mrs. John D. Schultz
Historian: Mrs. O. Hugh Fulcher
Treasurer: Mrs. Herbert Gates
Parliamentarian: Mrs. Julius Radice
Social: Mrs. I. Phillips Frohman
Doctors' Day: Mrs. Roger Williams
Research and Romance: Mrs. Harry Carlton
Remembrance: Mrs. Joseph Daly
Publicity: Mrs. Joseph W. Peabody, Jr.
Membership and D. C. Councilor: Mrs. James Wissler

The graduating class of 69 nurses from the **Washington Hospital Center** enjoyed a cruise on the Chesapeake, June 6, 3 days prior to their commencement on June 9.

Dr. Herbert P. Ramsey, when he was Chief of

AMEF GRANTS TO WASHINGTON'S MEDICAL SCHOOLS

Washington's three medical schools benefited recently by a total of $34,807.46 for medical education and research through grants from the American Medical Education Foundation. DR. DONALD STUBBS (second from right), President of the Medical Society of the District of Columbia, presented checks in the Medical Society's building, May 15, to (left to right): DR. K. ALBERT HARDEN, Vice Dean of Howard University College of Medicine; DR. HUGH H. HUSSEY, Dean of Georgetown University School of Medicine; AND DR. JOHN PARKS, Dean of George Washington University School of Medicine.

Georgetown received a check for $16,899.32; George Washington, $11,865.82, and Howard, $6,042.32. These grants are part of $1,172,599.60, contributed by doctors to the AMEF over the past year, which is being distributed to 85 medical schools throughout the country. Deans of the schools may use the money at their discretion for special projects or expenses outside of their budgets.

the Department of Obstetrics and Gynecology at the Hospital Center 5 years ago, conceived the idea of holding an outing of this kind for the graduating class as a part of its social activities. Dr. Ramsey, a member of the Corinthian Yacht Club, aroused the interest of fellow members in such a program and they have made available their yachts and time to make the cruises possible.

The yachting party cruised down the West River and up Chesapeake Bay as far as Bay Bridge, also into the Severn and Rhode Rivers. The outing included swimming, water skiing, and other entertainment.

Two distinguished Past Presidents of the American Medical Association have died recently.

Dr. Elmer Hess, world-famed urologist, died, March 29, in St. Vincent Hospital in Erie, Pa., where he had been Chief of Staff since 1941 and where he had founded the Urological Clinic, bearing his name, in the 1930's.

He graduated from the University of Pennsylvania in 1911. He served as a battle surgeon during World War I. He was President of the Pennsylvania Medical Society in 1947 and of the American Medical Association in 1955–56.

Dr. Louis M. Orr, immediate Past President of the American Medical Association, died at his home in Orlando, Florida, on May 23. Also a urologist, Dr. Orr served as the 113th President of the American Medical Association in 1959–60. He was a strong opponent of any system of government medicine, and during his tenure as President carried out an extensive traveling and speaking schedule. Before assuming the presidency of the AMA he was Vice Speaker of the House of Delegates and an ex officio member of the Council on Constitution and By-laws. At the time of his death he was Chairman of the AMA's Commission on the Cost of Medical Care.

He received his medical degree from Emory University in Atlanta, Georgia, in 1924. After practicing medicine briefly in Ohio, he opened an office in Orlando in 1927. He served as Colonel in the Medical Corps in World War II and was Commanding Officer of the 15th Hospital Center in Europe from 1943 to 1945.

CALENDAR OF SPEAKERS

The following members of the Medical Society of the District of Columbia have addressed lay groups during the past several weeks. The Society maintains a Speakers Bureau, sponsored by the Committee on Public Information, through which requests for speakers for lay groups, including radio programs, can be filled.

Date	*Speaker*	*Subject or Title*	*Organization*
April 25	Dr. Frederick Y. Donn	Discussion of film, "The Other City"	Civitan Club
April 26	Dr. Julius Schreiber	Understanding and Dealing with Our Prejudices	Men's Club of Montgomery County (Md.) Community Center
May 1	Dr. Julius Schreiber	Some Common Emotional Problems of Marriage and Family Life	B'nai B'rith Lodge, Wheaton (Md.) Chapter
May 4	Dr. John R. Cavanagh	Marriage and Mental Health	Arlington Deanery Council of Catholic Women
May 5	Dr. Edward C. Mazique	The Citizenship of Doctors	First Friday Club
May 18	Dr. Frederick Y. Donn	Discussion of film, "Breast Self-Examination"	Library of Congress employees
May 25	Dr. W. Montague Cobb, *panelist*	Where Can Older People Live?	Health, Welfare and Recreation Conference
May 29	Dr. Clifton R. Gruver	Health Problems of Older People	Community-sponsored Course on Aging

Personals

Dr. C. Willard Camalier, Jr. was recently appointed a member of the 3-member Medical Advisory Committee to the Board of Directors of the National Association of Blue Shield Plans.

Dr. Reginald S. Lourie, Chairman of the Department of Psychiatry at Children's Hospital, was named President-elect of the American Academy of Child Psychiatry during its Ninth Annual Meeting, held recently in Chicago.

Dr. Lourie, a graduate of Cornell University, received his medical degree from the Long Island College of Medicine, and the degree of Doctor of Medical Science from Columbia University. He is President of the American Child Guidance Foundation and a Past President of the American Orthopsychiatric Association.

Dr. Linwood L. Rayford, Jr., has been selected by Coroner A. Magruder MacDonald to serve as Deputy Coroner, succeeding Dr. Richard M. Rosenberg, who retired recently.

Dr. Rayford is a native of Mississippi, where his father, also a doctor, has practiced for 40 years. He received his undergraduate degree from Marquette University in 1947, and then came to Washington to study medicine at Howard University, graduating in 1951. After interning at D. C. General Hospital he practiced for two years in Greenville, Miss. He returned to Washington to become a resident in surgery at Freedmen's Hospital. Four years later he affiliated with D. C. General Hospital as Admitting Officer.

In addition to his private practice and hospital work, he teaches physiology at Howard University College of Medicine. He was sworn in as Deputy at the Morgue on May 29.

Dr. Lorenz E. Zimmerman, Chief of the Ophthalmic Pathology Branch of the Armed Forces Institute of Pathology, received the Fifth Edward Lorenzo

Holmes Award at a joint meeting of the Institute of Medicine of Chicago and the Chicago Ophthalmological Society on May 20. The citation described Dr. Zimmerman as "a vigorous and prolific scientist" who "has contributed to our understanding of diseases of the cornea, the nature of the defect in glaucoma, and the ocular abnormalities arising from a variety of infections." The citation also noted that he had trained others in his technics, and "has contributed much to scientific knowledge and education through extensive writing and lecturing."

At commencement exercises, June 7, 2 faculty members of George Washington University School of Medicine were given the title of Professor Emeritus. They were **Dr. Henry L. Darner,** Clinical Professor of Obstetrics and Gynecology at the University and a member of its faculty since 1928, **and Dr. Charles R. L. Halley,** Clinical Professor of Medicine, who has also served on the faculty of the University for 33 years.

Both Dr. Darner and Dr. Halley are alumni of Johns Hopkins University School of Medicine.

Dr. John R. Pate, Chief of the Division of Communicable Diseases for the D. C. Health Department, was elected Governor of the Chesapeake District of the Civitan International at the conclusion of its 3-day convention, May 21, at Ocean City, Md. He is Past President of the Washington Civitan Club.

Dr. Jack P. Segal was elected a Fellow of the American College of Cardiology, May 19, at the Biltmore Hotel in New York, during the annual meeting of the College.

Dr. Henry P. Laughlin, Associate member of the D. C. Medical Society, was selected to deliver the Beling-Englander Memorial Lecture at the 1961 Annual Institute of Psychiatry and Neurology, held at Lyons, N. J., in February. The Lecture is sponsored annually by the New Jersey Neuropsychiatric Association in memory of 2 pioneers in psychiatric practice. Dr. Laughlin's lecture was entitled, "Neurosis, Conditioning, and the Rule of Impression Priority."

Dr. J. R. B. Hutchinson, Associate member of the D. C. Medical Society, has been reëlected a Vice Chairman of the Arlington County Chapter of the American Red Cross.

MEDICAL-DENTAL BOWLING LEAGUE DINNER

The D. C. Medical-Dental Bowling League held its Twentieth Annual Dinner at the Brook Farm Restaurant, May 18. Nearly 50 doctors and dentists were present. Theodore Wiprud, Secretary of the Medical Society of the District of Columbia, and Dr. James Kerrigan, of the Dental Society, awarded prizes to the top teams and top bowlers for the season just completed. First place honors went to the Suburban Hospital Team, which includes Drs. M. Ottman, *Captain*, P. Porton, A. Betz, R. Simpson, H. Diamond and substitutes H. Davies and P. Andrews. The Emergency Hospital Team, captained by Dr. J. Sager, followed close behind in second place, while Frank Baiers' Sibley Hospital Team finished third.

There were 16 high individual performance prizes as well as prizes for the high averages on each team. Frank Baiers again took top honors with the League high average of 116. Second high average went to Dr. A. Betz, with 108 plus. High League set was Dr. W. Cushard's 382, high game Dr. C. Hageage, high strikes Dr. G. Ball, and high spares Dr. M. van Kinsbergen.

The booby prize this year went to Doctors Hospital Team, which finished 34 games out of first place. Dr. W. Eccleston, who captained the team, is out looking for additional blood, as are several of the other captains, according to the League Secretary, Jim Carter. Jim may be reached at Oliver 6-8043; League President Ottman, Whitehall 2-1621; and Vice President Bouchard, Emerson 3-2261. Call one of them to insure a berth for the 1961-62 season, which will begin early in September at the Bethesda 40 Alleys.

The list of bowlers who have been with the League 5 or more consecutive years continues to grow. This year the roster of the Five Year Club contained 33 names: Drs. P. Andrews, G. Ball, J. Belair, A. Betz, E. Bouchard, T. Brawner, R. Brown, M. Cashman, A. Crain, W. Cushard, A. Dibbs, P. Dorman, I.

Douglas, J. Finnegan, B. Golden, C. Hageage, H. Hawfield, H. Heiges, L. Klein, M. Kogan, G. McLain, W. Morse, M. Ottman, W. Perkins, P. Porton, F. Richardson, D. Richtmeyer, F. Schumacher, S. Thomas, M. van Kinsbergen, and Messrs. F. Baiers, J. Carter, and S. Kirchner.

Books Received

Acknowledgment is made of the following books which have recently been received. Selections will be made for more extensive reviews in the interest of our readers and as space permits. Physicians are urged to submit reviews of additional books which, in their opinion, merit comment.

Key and Conwell's Management of Fractures, Dislocations, and Sprains, 7th ed. H. Earle Conwell, M.D., F.A.C.S., Associate Professor of Orthopedic Surgery, University of Alabama School of Medicine, Birmingham, Ala.; Attending Orthopedic Surgeon, University Hospital, St. Vincent's Hospital, Children's Hospital, Baptist Hospitals, East End Hospital, and South Highlands Infirmary, Birmingham, Ala.; Consulting Orthopedic Surgeon, Veterans Hospitals, Tuscaloosa, Ala., and Montgomery, Ala.; Member, Trauma Committee, American College of Surgeons; Member, Fracture Committee, American Academy of Orthopaedic Surgeons; Member, Orthopedic Advisory Board, Alabama State Crippled Children's Service; Chief, Conwell Orthopedic Clinic, Birmingham, Ala., and Fred C. Reynolds, M.D., Professor of Orthopedic Surgery, Washington University School of Medicine, St. Louis, Mo. Price, $27.00. Pp. 1153, with 1227 illustrations. St. Louis: Mosby, 1961.

Mirage of Health; Utopias, Progress, and Biological Change. René Dubos. Price (paper), $.95. Pp. 240. Garden City, N.Y.: Doubleday, 1961.

Management of Hypertensive Diseases. Joseph C. Edwards, A.B., M.D., F.A.C.P., F.A.C.C., Assistant Professor of Clinical Medicine, Cardiovascular Consultant to Division of Gerontology, and Consultant in the Hypertension and the Cardiac Clinics, Washington University School of Medicine and Barnes Hospital, St. Louis, Mo.; Cardiologist and Director of Hypertension Clinic, St. Luke's Hospital, St. Louis, Mo.; Active Staff Physician, Deaconess Hospital, and Member of Consultant Staff, Missouri Baptist Hospital and St. Joseph Hospital, St. Louis, Mo.; Consultant, Council on Drugs, American Medical Association; Medical Consultant, Fifth Army of the United States, Office of the Surgeon, Chicago, Ill. With Foreword by Paul Dudley White. Price, $15.00. Pp. 439, illustrated. St. Louis: Mosby, 1960.

Lose Weight and Live. Robert P. Goldman. Drawings by Roland Rodegast. Price, $3.95. Pp. 235. Garden City, N. Y.: Doubleday, 1961.

Childbirth with Hypnosis. William S. Kroger, M.D. Edited by Jules Steinberg. Price, $3.95. Pp. 216. Garden City, N. Y.: Doubleday, 1961.

The Golden Age Cookbook. Phyllis MacDonald. Price, $2.95. Pp. 192, with drawings by Margot Tomes. Garden City, N. Y.: Doubleday, 1961.

Medical Almanac 1961–1962. A compilation of general information, statistics and other data relating to medical care, medical education, medical organizations and literature, incidence of illness and economic aspects of medical practice. Compiled by Peter S. Nagan, A.B., M.A., M.S. Price (paper), $5.00. Pp. 528. Philadelphia: Saunders, 1961.

Ciba Foundation Study Group No. 6. Metabolic Effects of Adrenal Hormones. Editors for the Ciba Foundation: G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P., and Maeve O'Connor, B.A. In honour of Prof. G. W. Thorn. Pp. 109, with 16 illustrations. Boston: Little, 1961.

Symptom Diagnosis, 5th ed. Wallace Mason Yater, A.B., M.D., M.S. (in Med.), F.A.C.P., Director, Yater Clinic, Washington, D. C.; formerly Professor of Medicine and Director of the Department of Medicine, Georgetown University School of Medicine; Physician-in-Chief, Georgetown University Hospital; Physician-in-Chief, Gallinger Municipal Hospital, Washington, D. C., and William Francis Oliver, B.S., M.D., F.A.C.P., Assistant Clinical Professor of Medicine, University of Southern California School of Medicine; Consultant, Santa Barbara General Hospital; Attending Physician, Cottage Hospital and St. Francis Hospital, Santa Barbara, California; Attending Physician, Service of Internal Medicine, County of Los Angeles General Hospital. Price, $15.00. Pp. 1035. New York: Appleton, 1961.

JAMES FARNANDIS MITCHELL, A.B., M.D., F.A.C.S.

(1871–1961)

In the death of Dr. James F. Mitchell on May 3, 1961, the Medical Society of the District of Columbia lost one of its most distinguished members. He was a charming and colorful man and his career in surgery was a brilliant one.

He was born in Baltimore, Maryland, July 1, 1871, and received his A.B. degree from Johns Hopkins University in 1891 and his degree in medicine from the same University in 1897, the year Johns Hopkins graduated its first class from the Medical School.

After graduating in medicine he remained at Johns Hopkins University as a house officer for 6 years. The last year of this time he was Chief Resident Surgeon and had the distinction of being the first graduate of Johns Hopkins University Medical

School to hold that position. In this capacity he worked most closely with Dr. William S. Halsted, who was Professor of Surgery at Johns Hopkins at that time. He also worked with Drs. Finney, Bloodgood, Cushing, Osler, Welch, Kelly and Young. All these men undoubtedly exerted a great influence on him.

In 1903 he came to Washington to enter private practice. In addition to carrying on a large surgical practice until 1948, when he retired, he was always most active in teaching and training young men. Many surgeons practicing in Washington today owe their position largely to Dr. Mitchell and are deeply grateful for having had the opportunity of working under him.

Dr. Mitchell served as a Lieutenant Colonel in the Medical Corps of the Army in World War I.

Dr. Mitchell was Chief of Surgery at Emergency Hospital from 1919 to 1945, and was Professor of Clinical Surgery at George Washington University 1919 to 1936, and Professor Emeritus until his death. He was one of the pioneers in work with local anesthesia. He was a diplomate of the American Board of Surgery, a Fellow of the American College of Surgeons, a Life member of the Medical Society of the District of Columbia, and a member of the American Surgical Association, the Clinical Surgical Society, and the International Surgical Society. He was also a member and Past President of the Southern Surgical Association.

Dr. Mitchell was married to Eliza Hutchinson Webb, who died in 1944. Their three children survive: James F. Mitchell, Jr., of Kingston, Jamaica; Harry Dorsey Mitchell and Mrs. Corcoran Thom, Jr., of Washington. He is also survived by his wife, Mrs. Madge Richey Mitchell, who lives at their home, 1344 19th Street, N.W., where Dr. Mitchell maintained his offices for many years.

In recent years Dr. Mitchell has not been in good health and most of his contemporaries have passed away, but his influence still remains, and he will be remembered long and affectionately by the many he has helped in various ways.

John H. Lyons, M.D.

JAMES F. MITCHELL AS I REMEMBER HIM

In the early hushed hours after his passing it is inappropriate and indeed impossible to offer adequate assessment of a man. Yet, this is the very time when personal memories press most insistently into consciousness.

Dr. Mitchell was my surgical chief, beginning nearly 30 years ago in the old Emergency Hospital. In the years of close association with him I came to feel a rather real identification with the men and events of his own eventful life. It seemed a natural way of surgical life for him to be so firmly seated on the dais about which his staff were variably clustered. Only Lyons besides himself used what Darner dubbed the "Throne Room." Marbury, Borden, Riddick in general surgery, Fowler in urology, Leadbetter in orthopedics, and of course lesser fry like Darner, Mason, Moran, Cafritz, et al had spots at varying distance down the hall.

To watch J.F.M. don rubber gloves, soaking in bichloride solution, was graphic reminder that this man used them first as Professor Halsted's scrub nurse, in which position he inherited them (before the Johns Hopkins Medical School was opened) from Caroline Hampton, who gave up the operating room to marry the professor. Only later were they used by the surgeon, at Bloodgood's suggestion, as Cushing tells us, during the time when both were senior residents over Mitchell.

To know Jim Mitchell was to feel acquainted directly with "Popsy" Welch, after whom he named each and every one of his long succession of French bulldogs, and especially to know Halsted, whose cocaine addiction and miraculous recovery were for so many years the secret only of Welch. The brilliant Osler of jaunty and humorous fame and the gynecologist Kelly completed the great Hopkins quartet.

In the early Hopkins days it is notable that Hugh Young, recuperating from measles at the Mitchell Bel Air home, studied the standard text on dermatology with its chapter on urinary disease and came back to work into the borning specialty of urology, and finally with Jewett and Herbst to cure Mitchell's bladder tumor by surgical resection a few years before his death.

To see Dr. Mitchell come faithfully to his student clinic in his last years with the tracheostomy which he had for a quarter century, often with high fever, was a reminder of the strict adherence to the great tradition of teaching.

Jim Mitchell was the senior of the senior triumvirate of surgeons in Washington. Now he is survived by the indestructible Charlie White, well in his seventh decade of active practice, and the urbane Harry Kerr in retirement.

By all Dr. Mitchell was recognized to be the master of anatomic surgery, gentleness of tissue handling, and skillful local anesthesia. At this moment it is good to be able to say, "He was my friend."

DONALD STUBBS, M.D.

Otosclerosis—Burtoff

(*Continued from page 390*)

Success in the surgical treatment of otosclerosis depends upon careful selection of patients (those with conductive deafness and good nerve function) and a meticulous, skilled surgical technic. Only time can reveal whether the present improved surgical technics are the best and ultimate ones for treatment of otosclerosis.

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Airport Orthopedic Injuries—Neviaser

(*Continued from page 394*)

the hostesses. A helpful regulation is the wearing of ballerina slippers by the hostesses while serving meals. However, we still will have to consider sudden occurrences of turbulence as a hazard in the high-speed aircraft.

SUMMARY

Two hundred and two orthopedic patients were cared for during an 8-year period at the Washington National Airport. Twenty-nine patients were operated upon, 14.4 per cent of the total number. An analysis of these cases revealed that the mechanic was the employee most frequently injured. One-third of the injuries were low-back derangements including protruded intervertebral discs. An outline of the injuries sustained and their causes has been given. Prevention of these injuries is important in decreasing the time lost from work. Methods of prevention have been discussed as well as the avoidance of injuries to hostesses through advance detection and notification of turbulence in flight.

The patients reported in this paper had injuries which were considered severe enough to justify orthopedic care or consultation. There were many more patients with minor traumata and lacerations which were handled by the local medical staff at the Airport.

Physiologic Methods in Acquired Heart Disease—Tanenbaum

(*Continued from page 399*)

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Warthin's Tumor—Alford and Klopp

(*Continued from page 405*)

tients has there been a recurrence, but only 5 have been followed for longer than 3 years. It is probable that with the increasing tendency to do "superficial parotid lobectomies" as the primary treatment fewer recurrences will be reported.

Summary

Ten cases of Warthin's tumor have been reported, and the histogenesis has been briefly discussed. Clinically it is a benign tumor occurring mainly in the parotid gland of males in the fourth and fifth decade. Although benign, it will recur locally if not completely excised.

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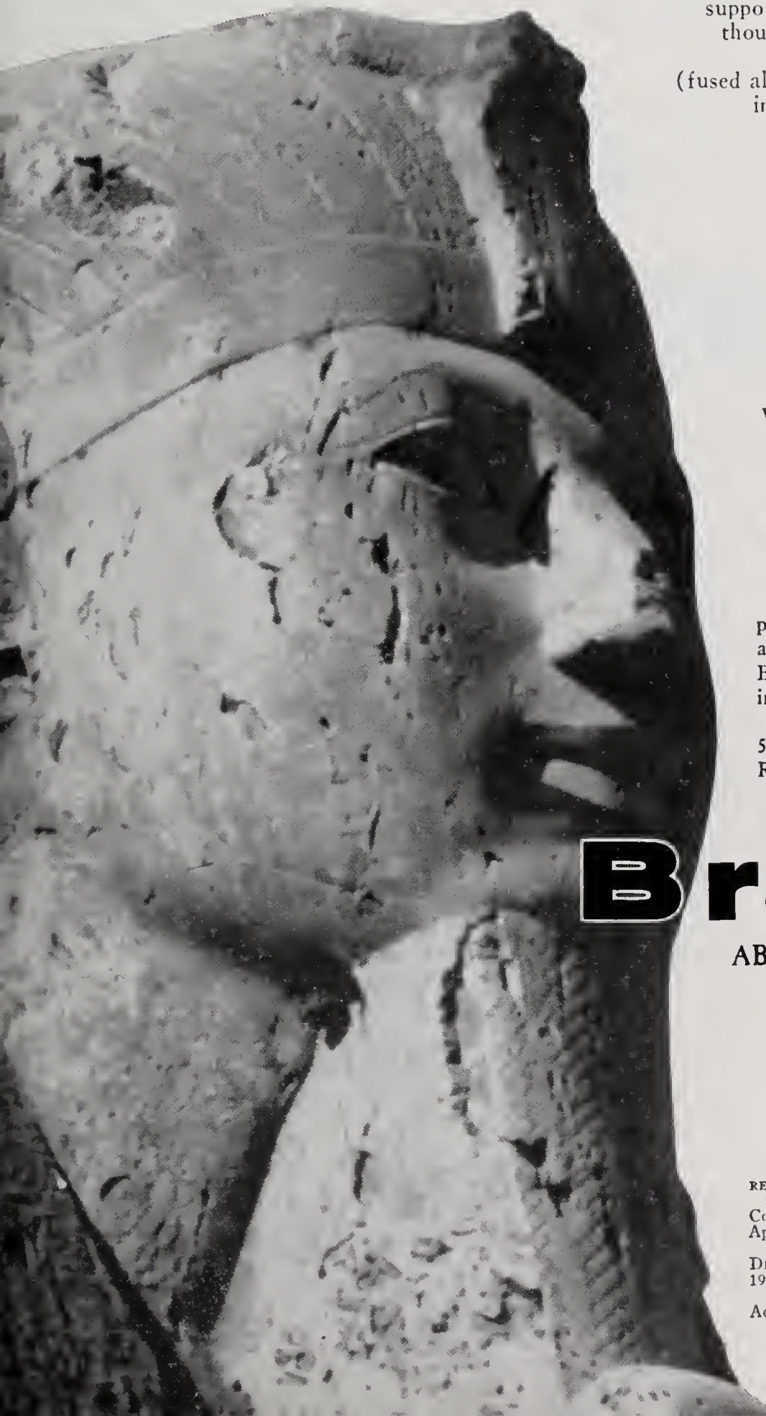
President's Page: Not by Bread Alone

(*Continued from page 411*)

All signs today point to the mounting need to renew the fine spirit of medicine, to expand the planned teaching of the humanities in our medical school curricula, to stir our practitioners to a rededication to these immutable values, and to proclaim abroad our deep understanding that "man does not live by bread only."

Donald Stubbs



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REFERENCES:
SAPERSTEIN, R. B.: Treatment of Acne with Long Term Continuous Abrasion. A.M.A. Archives of Derm. 81: 601, April 1960.
REES, R. B; BENNETT, J. H.; GREENLEE, M. R.: Newer Drug Treatment in Dermatology, Cal. Med., 91:1, July 1959.
SULZBERGER, M. B. & WITTEN, V. H.: The Management of Acne Today. Med. Clinics of No. America, 43:3, May 1959.

REFER TO PDR

Book Reviews

(*Continued from page 24*)

Progress in the Treatment of Fractures and Dislocations, 1950–1960. Thomas B. Quigley, M.D., and Henry Banks, M.D. Price, $2.50. Pp. 102. Philadelphia: Saunders, 1960.

This book is concisely written and can be read easily in one night. The material presented is directed as stated in the title, toward treatment, and contains many useful suggestions. Orthopedic residents and traumatologists will benefit from reading this type of review. The authors' viewpoint concerning the selective utilization of open type reduction with metallic fixation and replacement prostheses is well accepted by the majority of practicing orthopedists in this area. Little space, however, is devoted to preoperative diagnosis, indications for surgical intervention, and postoperative care of patients. Therefore, those who read the book should be well versed in those phases of orthopedic surgery. Lastly, I think the bibliography presented is excellent and will save much time for those who wish to delve more completely into the subjects presented.

Gerald D. Schuster, M.D.

The American Academy of Orthopaedic Surgeons: Instructional Course Lectures, Volume XVII, 1960. Editor: Fred C. Reynolds, M.D. Price, $18.50. Pp. 420, illustrated. St. Louis: Mosby, 1960.

This book is a compilation of the new courses of instruction presented in the 1960 Instructional Course Program of the American Academy of Orthopaedic Surgeons. Twenty-seven authors are represented in this volume, with their material divided into five groupings as follows: Fractures, Bone Graft Surgery, Children's Orthopaedics, Miscellaneous, and Athletic Injuries.

Under the part related to fractures, the greater portion is devoted to the management of fractures of the neck of the femur, fresh, ununited, and the use of prosthetic replacements. The rest of the part is devoted to fractures of the elbow in children and to vascular injuries.

Part II, which deals with bone graft surgery, consists of 4 papers which discuss homografts, different methods of bone graft procedure, causes and treatment of nonunion, and a survey of research involving bone implants, transplants, derivatives and substitutes.

Part III concerns children's orthopedics and comprises 3 articles which discuss control of the bone growth, unequal leg length, and management of the child amputee.

Part IV is mostly a symposium on disability evaluation with 1 paper covering surgical approaches to the cervical spine.

Part V is a symposium of various kinds of athletic injuries and includes papers dealing with overuse syndromes, unusual injuries, and injuries to the shoulder girdle.

The illustrations and the typography are excellent, the pages are large enough for easily read type, and the book is sturdily bound. Orthopedic and traumatic surgeons have in this volume an excellent guide to the newest thinking and experience with difficult and frequently encountered problems.

Maurice H. Herzmark, M.D.

Ciba Foundation Symposium on Haemopoiesis: Cell Production and Its Regulation. G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P., and Maeve O'Connor, B.A., Editors for Ciba Foundation. Price, $11.00. Pp. 490, with 107 illustrations. Boston: Little, 1960.

This book is a recording of the proceedings of the Symposium on Haemopoiesis held in February 1960 under the auspices of the Ciba Foundation. It contains the papers and discussions of a group of 27 international experts in haemopoiesis. The papers are well written and clearly present the authors' experiences in various fields of investigation of the blood-forming organs as studied by multiple disciplines. The experimental evidence is well documented and there are abundant pertinent references to recent and classical studies by other authorities. Each individual paper is followed by a round table discussion and, as would be expected, the discussions are of equal value to the papers.

The Symposium has not settled any of the multiple conflicting theories related to the most actively proliferating tissue in the body, nor the origin of the stem cell. It does serve to bring together many of the divergent theories, to emphasize the essential differences in the various theories, and to permit a crystallized discussion of their advantages and divergencies. The Symposium does illuminate some of the darker recesses of the problems of haematopoiesis and lights up many areas worthy of additional investigation.

This volume is recommended for the serious students of haematology, for medical libraries, and for the dedicated researcher.

Edward C. McGarry, M.D.

Trademarked drugs . . .

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In the field of medicine, as almost everywhere else in a free economy, the trademark concept has evolved over the years. As with most human institutions, there are some who may not consider it ideal; but it has brought about three signal benefits:

To the physician it gives assurance of quality in the drugs he prescribes—assurance backed by the biggest asset of the maker, his reputation.

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The American system has been pre-eminent in producing and distributing good medicines. Above all it has been successful in creating new advances in therapy. In a dubious effort to provide cheaper medicines by abolishing the trade names upon which the responsible makers stake their reputations, let us beware of sacrificing this success.

This message is brought to you on behalf of the producers of prescription drugs to help you answer your patients' questions on this current medical topic. For additional information, please write **Pharmaceutical Manufacturers Association,** *1411 K Street, N. W., Washington 5, D. C.*

BOOK REVIEWS

Complications in Surgery and Their Management, edited by Curtis P. Artz, M.D., F.A.C.S., and James D. Hardy, M.D., F.A.C.S., with contributions by 69 authorities. Price, $23.00. Pp. 1075, illustrated. Philadelphia: Saunders, 1960.

Many surgeons minimize surgical complications, some surgeons tend even to deny or soon forget their own operative and postoperative complications, but all surgeons are constantly exposed, as are their patients, to the hazard of complicating factors and disturbing developments even in minor or routine procedures. To be forewarned is the best way to avoid the "dangerous reefs" of surgery. And to profit by the experience of many other seasoned surgeons is the ideal way to obviate unnecessary difficulties as well as to facilitate the management of those complications which do occur. This new book by Artz and Hardy is a valuable contribution to this end by bringing together in a single volume the experience and considered opinions of 69 authorities concerning the avoidance and management of complications in all of the various branches of surgical practice. It constitutes a complete text on the pitfalls of surgery.

The general topics of infections, wound complications, shock, hemorrhage, transfusions, renal, pulmonary, cardiac, and hepatic complications are considered, as well as the many vascular, metabolic, nutritional and psychologic factors during the postoperative period. The major part of the book, however, covers the specific complications related to particular areas such as thyroid, biliary or gastric surgery. Each field is dealt with systematically and in adequate detail with current references to the literature included. The illustrations are plentiful and consist largely of drawings of unusual clarity.

This book is a courageous attempt to fill the void left by texts of surgery, texts of surgical technic, and surgical physiology by presenting in systematic detail the dangers of operative procedures and the management of complications encountered both at the operative table and in the postoperative period. It should be of great assistance to the student, the resident, or the mature surgeon whether used for preoperative study or as a reference source when complications occur. Its widespread use can be a factor in the improvement of surgery and surgical care.

Herbert M. Giffin, M.D.

Key and Conwell's Management of Fractures, Dislocations, and Sprains, 7th ed. H. Earle Conwell, M.D., F.A.C.S., and Fred C. Reynolds, M.D. Price, $27.00. Pp. 1153, with 1227 illustrations. St. Louis: Mosby, 1961.

In the seventh edition of this very familiar book, the authors have brought the text up-to-date with added illustrations, including roentgenograms and line drawings, as well as descriptions of new technics. While the experienced fracture surgeon may not always agree with some of the statements of the authors, their opinions are authoritative and based on sound practical experience.

The chapter on injuries of the spine is well worth reading, particularly that portion covering cervical spine injuries, since the diagnosis and treatment of neck injuries and their sequelae are all important today in the field of legal medicine.

The chapter on injuries of the hand has been revised by Dr. Arthur Stein, Jr. so that any surgeon treating the injured hand can obtain an excellent review on the surgery of the hand, not only as related to bone injuries but also in the care of the very important soft tissue structures that go to make up the complex skills of the human hand.

Due to his particular interest in the shoulder, the reviewer is somewhat disappointed in some of the points discussed in the chapter on injuries in the region of the shoulder girdle and shoulder. In only 2 lines is the operative treatment of fractures of the surgical neck of the humerus mentioned. Since severely comminuted or markedly displaced fractures of the surgical neck not infrequently require open reduction, some space should have been given to the various technics and materials used to obtain fixation. No description on the operative treatment for acromioclavicular dislocations is complete without mentioning the procedure for the transference of the coraco-acromial ligament which the reviewer feels is the ideal operative treatment for either recent or old complete acromioclavicular dislocations.

In the discussion on recurrent dislocation of the shoulder the Nicola operation is described as one of the methods that can be used for operative repair of this condition. This procedure is now seldom if ever used, having been replaced by the Putti-Platt and Bankart operations or by a bone block procedure.

No mention is made of the fact that fractures of the lesser tuberosity of the humerus are often associated with posterior dislocations of the shoulder and can be one of the diagnostic signs in the diagnosis of this lesion.

Placing those cases of stiff and painful shoulders in the "waste-basket" entitled periarthritis or bursitis is regrettable as the majority of cases of limited shoulder motion which may or may not follow trauma can often be properly classified if they are thoroughly examined and studied. Many are cases of adhesive capsulitis, the treatment of which is pretty well established.

Because of the overall excellence of this volume, this text is recommended for use by all traumatic surgeons as well as orthopedic surgeons.

Julius S. Neviaser, M.D.

(*Continued on page 26*)

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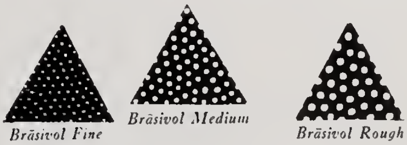

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REFER TO PDR

Book Reviews

(Continued from page 24)

Culture Methods for Invertebrate Animals. A Compendium prepared coöperatively by American zoölogists under the direction of a committee from Section F of the American Association for the Advancement of Science: James G. Needham, Chairman; Paul S. Galtsoff, Frank E. Lutz, and Paul S. Welch, assisted by many specialists whose names appear in connection with their respective contributions to this volume. Price (paper), $2.75. Pp. 590. New York: Dover, 1960.

This excellent treatise of 590 pages consists of contributions from over 180 specialists in all branches of biology. Clear and detailed instructions are given for the collection of all types of organisms. The formulae required for the maintenance of their growth are the result of years of practical experience. For teachers of biology and those engaged in biological research this work should be especially interesting. Even for the uninitiated it is fascinating.

The editors are to be congratulated for the fine arrangement of this vast amount of material and for the splendid index which makes this book so useful as a reference work.

Harrison H. Leffler, M.D.

Christopher's Minor Surgery, 8th ed. Edited by Alton Ochsner, M.D., F.A.C.S., and Michael E. DeBakey, M.D., F.A.C.S. Price, $10.50. Pp. 539, with 347 illustrations. Philadelphia: Saunders, 1959.

This new, seventh edition of this well known book has been edited by internationally recognized surgeons and teachers. It is written for the busy practitioner, the house officer, and the medical student as a quick reference.

Three important chapters have been added dealing with injury of the hand, diseases of the breast (very brief), and physical treatment in minor surgery.

Excellent illustrations and brief text advise the reader what he should and can do and how far he can go with treatment of surgical disorders which do not require hospitalization. Although the purpose is to deal only with conditions which do not require hospitalization, a chapter dealing with general anesthesia is included. Except for this insignificant lapse the authors cover excellently and concisely minor surgery as well as surgical disorders which require hospitalization, the signs and symptoms which are usually seen first in generalists' offices.

The chapter dealing with peripheral vascular diseases is extremely well written.

W. B. SAUNDERS COMPANY features . . . the following recent books in their full page advertisement appearing elsewhere in this issue:

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Fully covers diagnosis, clinical manifestations, medical and surgical management

TENNEY and LITTLE—
Clinical Obstetrics
Authoritative management of 24 problems which currently cause difficulty in safe delivery

It is highly recommended for quick reference, especially for general practitioners.

Laszlo N. Tauber, M.D.

Atlas of Obstetric Technic. J. Robert Willson, M.D., M.S. Illustrated by Daisy Stilwell. Price, deluxe edition, $14.50. Pp. 304. St. Louis: Mosby, 1961.

Dr. Willson notes in his preface that the gynecologist who wishes to revise his technic for performing a certain operation or to develop a better one can consult several excellent textbooks and atlases devoted exclusively to descriptions of pelvic operative procedures, but unfortunately, there are few comparable publications for obstetricians. His book, therefore, is an attempt to fill that gap. He attempts, as he says, to include detailed descriptions of operative procedures accompanied by numerous illustrations, with the intention of making his book an adequate and suitable reference for specialists when confronted with unusual problems of labor and delivery.

His book is divided into 14 chapters, covering such procedures as normal labor and delivery through induction of labor, forceps delivery, and including placenta previa and craniotomy. The illustrations are exceptionally good, the text is in most instances on the brief side, and best of all stated with positive clarity.

All in all I think the Atlas would be a fine addition to anybody's library of obstetrical volumes. However, I would disagree on one point, namely, that this book would be more useful to the student, the intern, and the general practitioner rather than to the specialist. I do not mean that the book is of no value to the specialist, but I do believe that the text and the illustrations are of such a quality that those who are beginning their study of obstetrics would obtain a great deal of value from the text even if they had not covered all the basic or fundamental material in this field.

Melchior F. R. Savarese, M.D.

MEDICAL ANNALS
of the District of Columbia

August 1961 VOLUME XXX • NUMBER 8

PROVIDENCE HOSPITAL NUMBER

This is the second of a second series of special numbers of the Medical Annals, the scientific material for which is supplied by medical institutions and scientific organizations in the Washington Metropolitan Area. This issue, the Providence Hospital Number, commemorates the Centenary Year of the founding of the Hospital. The Editorial Board is indebted to Dr. Kenneth L. McCoy, Director of the Department of Pathology of Providence Hospital, and members of his committee, who secured the papers which appear in it. Due to limited space all of the excellent papers could not be published but some of them will appear in subsequent issues during the year.

The History of Providence Hospital*

This is the Centenary Year of Providence Hospital. Born during the Civil War, the Hospital formally opened 6 weeks after the declaration of war and 6 weeks before the disastrous Battle of Bull Run. What were the circumstances of its founding and its subsequent history?

Washington City, founded in 1795, was still a small country town in 1861, but it was the Nation's Capital and would be transformed into a metropolis by the coming Civil War. The only general hospital in the City in that fateful year was the Washington Infirmary. On August 29, 1842 Congress appropriated $10,000 for the renovation of an old jail on Judiciary Square as an insane asylum and hospital. However, after the repairs were completed the asylum and hospital were not used by the Government. On June 15, 1844 Congress passed an Act directing the Commissioner of Public Buildings to "permit the Medical Faculty of Columbian College (now George Washington) to occupy the insane hospital for the purpose of an infirmary for medical instructions and for scientific purposes." This became known as the Washington Infirmary and was the first real hospital in Washington. In April 1861, shortly after the declaration of war, the Government requested the return of the property for use as a military hospital. (In November 1861 the Washington Infirmary burned to the ground.)

It was evident that a new hospital would have to be established, and a group of physicians, headed by Dr. Joseph M. Toner, approached the Sisters of Charity of Emmitsburg, asking them to take charge of such an institution. This order of Sisters had been in Washington since 1825, when they founded St. Vincent's Orphanage and School. Many leading physicians of the City, colleagues of Dr. Toner, knew and were friends of the Sisters and were impressed by their work. It is probable that the Sisters of the orphanage acted as intermediary between the soliciting doctors and the nuns at Emmitsburg. In fact, Sister Anne Simeon, the head of the order, had been stationed at St. Vincent's Orphanage for some time and personally knew most of the physicians in the District of Columbia. Sister Lucy Gwynn, Superior of St. Vincent's in 1861, according to old records, aided in the negotiations. In any event, the atmosphere was most cordial and the Sisters agreed to start a new hospital. These negotiations were soon settled, and the Sisters and physicians began a search for a suitable piece of property, which was found on Capitol Hill. The daughters of Daniel Carroll, distant cousins of Charles Carroll of Carrolltown, were friends of the Daughters of Charity since the days of Mother Seton and had been students at their school, St. Joseph's College, Emmitsburg, Maryland. These ladies, owners of the Nicholson Mansion at the corner of Second and D Streets, Southeast, willingly rented this house to the Sisters in May, 1861. After some slight alterations and renovations, the establishment of the new hospital was announced in the *National Intelligencer* on June 8, 1861, as follows:

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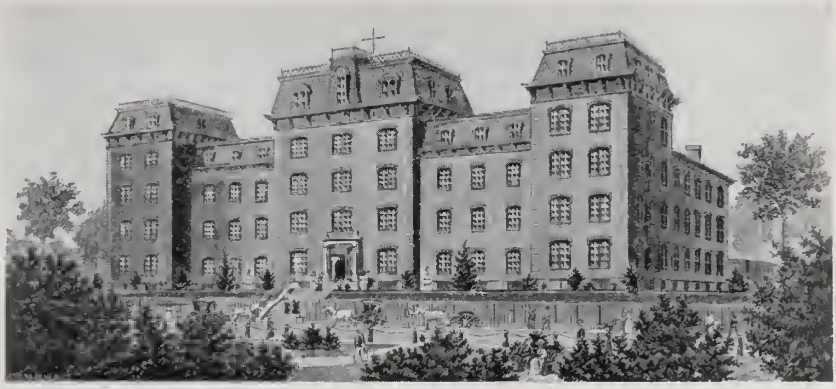
* This history of Providence Hospital is abstracted from the "Providence Centennial Book," issued by the Publications Committee of the Providence Alumni Association, with the coöperation of Sister Eleanor, Administrator. Committee members are Drs. Samuel Zola, John A. Long and Philip A. Caulfield.

> "In the course of a few days a hospital under the charge and direction of the Sisters of Charity will be opened for the reception of patients. The site chosen for the institution is Nicholson Park, formerly the residence of the late Major Nicholson, on Second Street, East, opposite the well known Carroll Mansion. The house is large and airy and the location high and healthy. The Sisters who will preside over the institution are experienced nurses. They devote themselves to the attention of the sick, not for the sake of compensation but as a religious duty."

On June 10, 1861 the Hospital was formally opened and in a few days received its first patient, a good Irishman named Lawrence O'Toole. Sister Mary Carroll (no relative of the owners of the property) was in charge, assisted by Sister Mary O'Neill, Sister Mary Vincent Foley, and Sister Mary Alfonza Groell.

JOSEPH M. TONER, M.D.
1825–1896

The Hospital had been in operation only 6 weeks when the First Battle of Bull Run was fought on July 21, 1861. The casualties from this battle were brought back to Washington. Capitol Hill became known as "Bloody Hill" and was covered with tents for soldiers wounded in battle. The facilities of the Hospital were small and the number of casualties so great that the Sisters often had to leave the Hospital and care for the wounded in the surrounding tents. The records of the Hospital state that one of the first soldiers wounded at Bull Run was admitted to the Hospital on July 22, 1861, the day after the battle. The records also reveal that the first soldier to receive a pension for Civil War injuries was treated at Providence in July, 1861. Later in the war the first person of Jewish faith to be awarded the Congressional Medal of Honor,



PROVIDENCE HOSPITAL—1872

Leopold Karpeles, was hospitalized at Providence, according to family records, for wounds incurred in the Battle of the Wilderness. Throughout the Civil War the Hospital provided care for casualties of the North and the South and the civilian population.

The building of 83 large military hospitals in the City removed much of the original load of caring for the military, and the Sisters and the physicians of the staff were able to care for the civilian population. However, many Sisters of Charity were sent to Washington to work strictly in the military hospitals, particularly the 2,500-bed Lincoln Hospital. This is one of the reasons why the work done at Providence has sometimes been confused with these military hospitals. Providence was the only hospital not taken over by the military in Washington during the Civil War and the only private hospital that has remained in continuous operation since that time.

With the requisition by the military of the Washington Infirmary in April, 1861 no facilities were present in the District of Columbia to care for the residents or the transients. Some attention was given to the city poor at the infirmary attached to the city poor house, but this was not adequate. In 1862 Congress appropriated $6,000 to Providence Hospital "for the support, care and medical treatment of 40 transient paupers, medical and surgical patients." This was the main financial support of the new Hospital. This appropriation was continued for 3 years but failed in 1865, only to be raised to $12,000 on April 7, 1866. The number of patients to be treated was also raised from 40 to 60. The Hospital at this time found a powerful and persistent friend in the Honorable Thaddeus Stevens, who later was joined by the Honorable Sam Randall and the Honorable James A. Garfield. These men aided the newly formed Hospital for many years and helped to obtain an annual appropriation.

The Hospital was granted a charter by Congress in 1864. With the second appropriation of April 7, 1866 of $12,000, the same Act appropriated $30,000 for the erection of an additional building. Two years later, in 1868, an additional $30,000 was appropriated for the completion of the Hospital. This enabled the center and the original east and west wings to be completed by 1872.

At the time, it was provided that all expenditures made by Congress should be made under the direction of the Surgeon General of the Army. This relationship of the Hospital to the Surgeon General of the Army must have been satisfactory, since it continued until 1920. On numerous occasions the Surgeons General, and particularly Surgeon General Sternberg, testified before Congress as to the excellent care given by Providence to the poor of the District of Columbia.

Another type of medical care which Providence in the early days provided was for the sick and injured merchant sailors from the then busy ports of Alexandria and Georgetown. These sailors were placed in Providence by the Collector of the Ports and put under the care of surgeons of the Marine Hospital Service. The agreement between Providence and the United

States Public Health Service (which grew out of the Marine Hospital Service) has continued to this day. Employees of the United States Government with service-connected acute illnesses or injuries are cared for at Providence by surgeons of the United States Public Health Service. With the development of other hospitals in the District of Columbia and the founding of Gallinger Hospital (now District of Columbia General Hospital), Providence gradually shared the medical care of the indigent.

The early bulletins of the Hospital showed that the group of physicians most active were among the most prominent in the early days of the District of Columbia. Joseph M. Toner, one of the founders of the Hospital, was the house physician and surgeon. It was by his foresight and effort that the Hospital was opened to the patients of all physicians in the District of Columbia. This was a radical departure from the usual hospital procedures of the time. Most hospitals were "closed staff" hospitals, and only physicians on the staff could have patients admitted to their institution. The principle of "open staff" hospitals in the District of Columbia has continued to this day.

Dr. Toner, a man of many talents, was a historian, and his connections with the establishment and founding of many of the hosiptals and charitable institutions of the District of Columbia are facts of history. He was President of the Medical Society of the District of Columbia in 1871. In 1874 he was President of the American Medical Association and in 1886 President of the Medical Association of the District of Columbia. His oration delivered before the Medical Society on September 26, 1866 is the basis of many facts concerning the early medical history of the District of Columbia. In 1882 he presented his valuable library of 2,800 books and 1,800 pamphlets to the United States Government, and it is now the Toner Collection in the Library of Congress.

Other physicians connected with the Hospital in the early days, and particularly in the postwar years, were Drs. Noble Young, Johnson Eliot, Flodoardo Howard, Grafton Tyler, Daniel R. Hagner, John Campbell Riley, William Marbury, J. Ford Thompson, Charles M. Ford, Nathan S. Lincoln (father of Gould Lincoln, the columnist), and William P. Johnston. The first 3 of these men were among the 4 founders of Georgetown Medical School in 1849. At least half of the rest of these men have descendants who are practicing physicians of the District of Columbia today. The names of Hagner, Thompson, Marbury and Tyler are quite familiar to the medical profession of this City. Many members of the staff of the Hospital before and after the turn of the century will be remembered by doctors living today—such names as Joseph Taber Johnson, who was Dean of Georgetown Medical School for many years, and a prominent member of the staff; Harrison Crook, the surgeon; John Woart Bayne; Thomas Francis Mallan; George Lloyd Magruder; Ethelbert Carroll Morgan; Charles Roscoe Luce; James Kerr, a noted surgeon and father of Harry H. Kerr, who served on the staff before 1900, and many others; later John Wesley Bovée, J. Lawn Thompson, Claude C. Caylor, Casimer Leibell, Charles Stanley White, John R. Foote, a Georgetown Dean, Joseph J. Mundell, James F. Mitchell, James A. Flynn, Henry R. Schreiber, Robert Joseph Conlon, Robert Young Sullivan, John Thomas Kelley, John F. Brennan, Paul S. Putzki, Fred R. Sanderson, James A. Cahill and John Allan Talbott. Other physicians too numerous to mention also served the poor without charge. Some of these men are still alive and carrying on medical practice, notably Charles S. White, Harry H. Kerr, John F. Brennan, Sr., and John A. Talbott.

The connection between Georgetown Medical School and Providence dates from the founding of the Hospital. The wards, amphitheater and dispensaries were used exclusively by the teachers of Georgetown for clinical demonstrations to their students. Students from Howard University and Columbian Medical School were

OPERATING AMPHITHEATER—1900

also invited as guests to demonstrations. In 1898 Georgetown University built its own hospital, but the relationship between the two institutions continued for almost a century. Many physicians on the active staff of Providence today are members of the teaching faculty at Georgetown. Two Deans of Georgetown have been interns of the hospital, and many departmental heads received their hospital training at Providence. The old amphitheater built in 1881 was erected for the sole purpose of teaching students and nurses. Old records of Georgetown state that Sister Beatrice, the Superintendent, erected it upon requests by the teachers of Georgetown who were members of the active staff of the Hospital. Shortly after the turn of the century Dr. Charles Marbury and Dr. Joseph Wall taught students the fundamentals of medicine and pediatrics in the wards of Providence. In the early 1920's Dr. Charles S. White became Chief Surgeon and taught his students from George Washington and the surgical house staff at Providence. In the 1930's and 1940's Dr. James A. Cahill, Professor of Surgery at Georgetown and former resident surgeon of Providence, did the same.

The building of the Hospital covered many years, and gradually, lot by lot, the entire square 764 in Southeast Washington was acquired by purchase. The last piece of property was bought on August 13, 1897, and Providence was able to enlarge the original building and also to add a contagious ward. In the following year, 1898, at the request of the District Commissioners and by an appropriation of Congress, a large contagious disease building containing 37 beds was erected on the hospital grounds. Before this time the District Commissioners had been looking for a site for a hospital to care for contagious diseases other than smallpox. No site could be obtained until Sister Beatrice, Administrator, offered the use of the Hospital land for this purpose. This unit was the first Contagious Disease Hospital of the District and was used until 1931, when these patients were hospitalized at Gallinger Hospital. This old building lay vacant for almost 10 years. In 1939 Congress appropriated $50,000 for renovation of this building for use as an Outpatient Department. The Honorable Ross Collins, Congressman from Mississippi, Chairman of the District Committee, and the Honorable Joseph P. Tumulty, former Secretary to Woodrow Wilson, were very helpful in obtaining these funds. After the building had been renovated an additional $15,000 was appropriated by Congress for equipping and furnishing the building. Thus, the Outpatient Department, which had originally been in the basement of the main building and had long since been outmoded, was moved to a separate building.

There was still a large area of the property purchased in the previous years which for a while was used for a walking garden for the patients. It soon became evident that the Hospital would have to be expanded, and the Sisters by the authority of Congress in 1900 borrowed $200,000 from the Philadelphia Savings Fund Society of Philadelphia, Pennsylvania. In July 1901 the new East Wing was started, but before the building was finished the total cost had amounted to $530,629.67. This large debt was staggering. Some civic-minded members of the Board, notably Mr. N. H. Shea, loaned the Sisters $30,000 at reduced interest rates, and some other friends endorsed the note of the Hospital to the Citizens National Bank, allowing them to borrow another $50,000. Increased costs were also made necessary by the finding that the original building was in a bad state of decay and had to be repaired along with the construction of the new building. On February 1, 1905 Congress was again petitioned for an appropriation to make up the deficit in the construction of the building. This amounted to $130,626.67. However, it was not until the fiscal year of 1907 that Congress appropriated this money to help the Sisters settle their long-standing debt.

In 1902 the new East Wing had been finished and the completed Hospital was considered one of the finest in the country. The members of the staff in petitioning Congress in 1905 for the additional funds stated that many of them had traveled extensively through Europe and through the United States and had never seen a finer hospital. Many of us who spent our early years in training at the old Hospital 30 or 40 years later thought it possessed a grandeur that few other buildings and institutions had.

An interesting sidelight to the appropriation made for the contagious disease building and the subsequent care of contagious patients in this building was the legal battles that took place concerning the appropriation and payment of money by the Commissioners of the District of Columbia to Providence. A citizen in the District of Columbia by the name of Bradfield entered suit against the Commissioners, stating that paying this money violated the First Amendment, since Providence was under the auspices of a religious group and the First Amendment distinctly stated that no religion could be aided directly by the Government. The case was finally taken to the Supreme Court, and the Court decided in 1898 that an eleemosynary institution regardless of its religious affiliation could receive money from the Government by appropriation so long as it carried out the regulations of its charter and took care of sick and injured patients regardless of race, color or creed. The case of Bradfield versus Roberts has been a landmark of Constitutional decisions and influenced all subsequent appropriations made by Congress to religious organizations and hospitals. It has never been controverted, although frequently assailed.

One of the unusual activities of the old Hospital was the alcoholic or topers' ward. Sister Regis, who in her early days as a Daughter of Charity had gone to Cuba with the Army in 1898, was later in charge of the ward for many years. It was said that her gentle care and good counsel to many men of prominence both in the official and business life of Washington who had imbibed too freely and spent a few days in her ward were never forgotten. Later when the Hospital needed a friend it was told that some of these men were the first to volunteer their services. The park across the street from the Hospital was established, so it was said, because the Sisters did not want the front of their fine building obscured by other buildings. The names of these benefactors of Providence have been lost to history.

Some of the old bulletins of the Hospital around the turn of the century noted that the

Board of Visitors contained many of the most outstanding local and national names, including General Joseph C. Breckenridge, of Civil War fame; the Honorable N. N. Parker; Edward B. McLean, the founder and owner of *The Washington Post*; Thomas F. Walsh, father of Evelyn Walsh McLean, who had struck it rich in Comstock lode; the Honorable Joseph C. Cannon, Speaker of the House; Gifford Pinchot, Cabinet member of Theodore Roosevelt and later Governor of Pennsylvania; the Honorable J. H. Gallinger, in whose honor Gallinger Hospital was named; Peter Goelet Geary, the great financier and Senator from Rhode Island; and Joseph Leiter, another prominent Washingtonian. These men not only aided Providence by their prestige but in many instances were called to help the struggling Hospital by contributing funds. No one knows how much they contributed to help the Hospital continue to take care of the poor and the sick of the District of Columbia. They should not be forgotten.

The Spanish-American War and World War I both threw additional burdens on the Hospital, and because of the wise construction it was possible to expand facilities to meet the need. Following the Spanish-American War and during the First World War many wounded and disabled veterans were brought back from the battlefronts and rehabilitated at Providence. World War II brought a tremendous increase in population in Washington, and the facilities were taxed beyond belief. Every conceivable space was fitted with beds, and the operating room would run a daily schedule of 25 to 30 operations. In fact, the increase in population in Washington soon made the authorities and friends at Providence aware that the old Hospital was no longer adequate to meet the needs of the growing community. It was decided in 1945 that additional space or an additional location for enlarging the Hospital would have to be found. The cost of tearing down the old building was so prohibitive that it was decided to look about the City to find a suitable location. In 1947 a piece of ground that was adequate was located at the corner of Twelfth and Varnum Streets, N.E., adjoining the Campus School and the Sisters College. The property was purchased from Catholic University and became the site of the new Providence Hospital. With the help of many friends in the Government and private citizens of the District of Columbia, and with an appropriation of $4,000,000 by Congress, the new hospital was occupied on April 6, 1956. This completely air-conditioned modern hospital is one of the finest in the country. It was awarded the Hospital of the Year Award by the Modern Hospital Award Committee of the National Association of Architects. Its excellent condition today is a tribute to wise planning and building.

THE NEW PROVIDENCE HOSPITAL—1961

No history of Providence would be complete without mentioning some of the Superiors who directed the activities of the Hospital over these many years. First Superior was Sister Mary Carroll, who came to Washington with 3 other nuns and ran the Hospital during the Civil War years. In 1866 Sister Loretta O'Reilly, who had served at the Lincoln Hospital, was appointed Superior and remained so until 1870, when Sister Beatrice Duffy was appointed. Sister Beatrice had also served in the military hospitals in Washington during the war and was quite familiar with the District of Columbia. She was a well-known figure in Washington life and a friend of many prominent people, and was present and stood by the deathbed of Thaddeus Stevens at his home. She obtained all additional property needed for the construction of the new East Wing, the nurses' home, the power house, and the contagious disease building, and under her wise guidance the Hospital expanded and progressed. She died on September 25, 1899, having served the Hospital and her country for 30 years. At the time of her death the Medical Board adopted a resolution which read in part as follows: "... viewed from any standpoint, Sister Beatrice must be graded as a woman of unusual power in her day and generation."

Among other notable Superiors were Sister Berchmans Beltzhoover, who served the Hospital from 1906 to 1927, Sister Rose McGhee, Sister Marie Daly, one of the founders of the Washington Hospital Council, and, finally, Sister Celeste Cummings, who was Administrator of the Hospital when plans for the new Providence were started. It was through her wise guidance and decisions that the fine new building we now occupy was constructed. The present Administrator, who also aided in its building, is Sister Eleanor McNabb.

The one hundred years of this Washington medical institution has resulted in many firsts, some of which have been described and others briefly mentioned. Many nursing schools, including that of Providence, were organized around 1892 and 1893, and Providence was the first hospital to organize a 3-year school in 1896. The first Social Service Department was organized in 1919. The first intern trained in Providence Hospital was Dr. Joseph Repetti, in 1896, followed by Dr. Joseph Wall in 1897. The first house physician from Washington, Dr. Edward Stone, to be killed during World War II left Providence in 1940 to join the British Army and was killed in action in North Africa. Providence was the first hospital in this area to be approved for training by the Cadet Nurse Corps of the United States Army during the Second World War. Providence Hospital was among the first in the District of Columbia to be approved for a 4-year training program for surgical residency by both the American College of Surgeons and the American Medical Association.

The history of a hospital such as Providence is the history of medicine during the last 100 years. It is the history of the days before antisepsis; the beginning of modern cellular pathology; the advent of local anesthesia, first advocated by Halsted; and the use of insulin in the treatment of diabetes. It witnessed the gradual eradication of all great epidemics, such as typhoid, dysentery, measles and mumps, and the control of poliomyelitis. It is the history of the gradual evolution of the socioeconomic aspects of medical education in the City of Washington from the old days of the doctor's apprentice, the evolution of the residency training program, and the clinical clerkship of the highly educated students of today. Yet, one hundred years is still short enough for the present generation to have talked with parents and grandparents who have participated in the development of the modern community hospital which stands ready to meet the demands of the world today.

Vaginal Hysterectomy—A Modified Technic

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THE PROPERLY PERFORMED vaginal hysterectomy with repair of the supporting structures offers the following advantages: a safe operation, low morbidity, a short convalescence period, and a high percentage of symptomatic relief. The major indication for the operation is uterine prolapse, which occurs most frequently in women beyond the child-bearing period of life.

The principal operations in current use to correct uterine prolapse are:

1. The Fothergill-Manchester type of operation
2. The Watkin's interposition type of operation
3. The hysterocolpectomy
4. The vaginal hysterectomy and colpoperineorrhaphy.

An adequate perineorrhaphy is an essential part of every operation for uterine prolapse.

The Fothergill-Manchester operation is used for the patient with first degree prolapse during the child-bearing period. The results of the Watkin's interposition procedure are excellent, but the diagnosis of the etiology in any future uterine bleeding problem is made difficult. Zacherl and Tischer,[1] when doing interposition operations, found pathologic bleeding in 10 per cent of their cases and malignant disease in 1.2 per cent. The hysterocolpectomy may be used on an elderly patient where coitus is no longer a factor. The result obtained is usually good, but it has the disadvantage of being an unanatomic procedure. Vaginal hysterectomy is the operation of choice in most cases of second degree prolapse and procidentia.

Falk et al,[2] reporting on 174 vaginal hysterectomies, found a high incidence of uterine and ovarian disease not accompanied by clinical manifestations and not detected on pelvic examination. He concluded, "The results of this study have further confirmed our belief in the advisability of removing the uterus, once it has fulfilled its reproductive function, during an operative intervention for uterine prolapse."

Aldridge[3] mentions that a high percentage of patients seen at or near the menopause have abnormalities of the uterine cervix or fundus necessitating hysterectomy. When the uterus is prolapsed as the result of birth injuries, one also finds injuries to the vaginal walls and pelvic floor which can be repaired when the vaginal hysterectomy is done.

One thousand vaginal hysterectomies were studied by Benson[4] with reference to the technical difficulties at operations and postoperative complications in the first 12 hours, and he emphasizes the following problems:

1. Difficult peritoneal entry
2. Injury to the bladder
3. Inability to remove the uterus
4. Hemorrhage, immediate or delayed.

Taylor and Hansen[5] recently analyzed the cases of 100 patients who had vaginal hysterectomy and colpoplasty, one-half of whom were over 50 years of age and the other half under 35 years of age. They found a high incidence of morbidity, especially in the younger age group, and attribute it to the increased vascularity of the pelvic organs in this class of patients.

A major problem with vaginal hysterectomies and repair has been hemorrhage, and to solve this problem we have worked out a technic which has given good results and in which bleeding has been kept to a minimum. Thirty-seven operations have been done by this method, and in no instance has it been necessary to return the patient to the operating room for secondary suturing of bleeders or evacuation of hematomas.

In order to consider the results of a vaginal hysterectomy to be a success, it is essential that the vaginal vault be well supported and elastic and that its full length be maintained. A vault which is shortened or fixed by scar tissue may lead to complaints of pelvic pain or dyspareunia. Likewise, subsequent partial or complete prolapse of the vagina is difficult to correct.

It should be noted that there is some controversy as to the exact anatomy of the connective tissue of the pelvic floor. We find a distinct layer of tissue between the adventitial layer of the vagina and the bladder and rectum, respectively. Whether this is a connective tissue supplement of the vagina, composed of loose collagen tissue and smooth muscle cells, or whether it is a visceral extension of the endopelvic fascia is not definitely agreed upon. There is also a question as to whether this layer has any supporting capacity in the normal woman and in one who has had reconstructive vaginal surgery. We believe that this layer of tissue has a minor supporting function and that it should be repaired as a separate entity, which results in a sound structural repair and enhances the function of the postoperative vagina. However, we do think that the mainstay of vaginal reconstructive surgery is an adequate perineorrhaphy.

PREOPERATIVE WORKUP

The routine preoperative workup of the patient includes a medical history, a complete physical examination, a hemogram, a urinalysis, and an exfoliative cytology study of the cells from the vagina, cervix, and endometrium. If the cervix appears abnormal or the exfoliative cytology indicates pathologic findings, multiple cervical biopsies and a dilation and curettage are performed. Any existing vaginitis and cervicitis are treated. Patients with atrophic vaginitis are treated with topical estrogen for several days prior to admission.

The patients who have evidence of heart disease or are suspected of having heart disease are examined by medical consultants and, if indicated, electrocardiograms are performed. Patients with stress incontinence or any symptom referable to the urinary tract are thoroughly studied with cystoscopy and pyelography.

The evening before surgery the patient is given a Zephiran douche, and this is repeated the morning of the operation. It is our routine to have the patient typed and to have 2 units of whole blood crossmatched and on reserve.

OPERATIVE TECHNIC

The basic technic to be described is that originally advocated by Heaney[6] with some modifications. Strict adherence to detail and the meticulous performance of each step in this operation will result in a good repair with minimal loss of blood. Blood vessels are clamped and tied when they are cut. When a ligament is clamped and divided, the pedicle is ligated and the clamp removed. This step keeps the number of instruments to a minimum in the small operative field. Pedicles should be left long and doubly suture-ligated, the second suture being used for traction and identification.

The labia majora are sutured to the skin of each adjacent thigh with a single suture. After bimanual examination the cervix is grasped with a Jacobs' tenaculum and pulled down toward the introitus. The uterine cavity is sounded, the cervical canal dilated, and the endometrial cavity thoroughly explored and curetted. When the surgeon is satisfied that everything is in order, the operation is started.

The tenaculum is now placed on both cervical lips and the cervix held downward, while a circumferential incision is made completely around the cervix at the junction of the vaginal wall with the cervical mucosa. This incision extends through the full thickness of the mucosa. The mucosa is pushed upward by the gauze-covered index finger for a distance of about 3 cm. This is done anteriorly, laterally, and posteriorly, and when it is in the proper plane the mucosa advances easily. As the bladder with the attached anterior mucosa is being elevated the bladder pillars come into view (figure 1). At this point the ureters may be palpated by placing the index finger between the pillars in the area between the bladder and the cervix and feeling for them on either side. The bladder pillars are then clamped, cut, and ligated, a procedure allowing further mobilization of the bladder (figure 2).

The cervix is now held upward while the posterior vaginal mucosa is advanced farther on the cervix until the posterior peritoneum comes into view. The peritoneum is entered and the opening enlarged from one uterosacral ligament to the other. The peritoneum is tacked to the posterior vaginal mucosa in the midline, leaving both ends of the suture long. One end is threaded into the needle and a running, lock stitch is taken laterally to one uterosacral ligament. The same procedure is carried out on the opposite side (figure 3). This approximates the posterior peritoneum with the posterior vaginal mucosa and establishes hemostasis along the incised vaginal cuff, where bleeding can be very troublesome. Once bleeding is controlled here the remainder of the hysterectomy may be carried out with minimal blood loss.

Both cardinal ligaments are clamped, cut, and ligated close to their uterine attachments, and their pedicle sutures are tagged with Kocher clamps (figure 4). This step frees the uterus and allows it to be brought lower into the vagina.

The anterior vaginal mucosa with the attached bladder is pushed further up toward the symphysis until the anterior or vesicouterine fold of peritoneum is seen. The peritoneum is opened and the distal edge tagged with a suture for later identification.

The cervix is pulled upward and a uterosacral ligament is grasped with a Kocher clamp, divided and ligated. The other ligament is treated likewise, and sutures on the distal ends are left long and tagged with hemostats (figure 5).

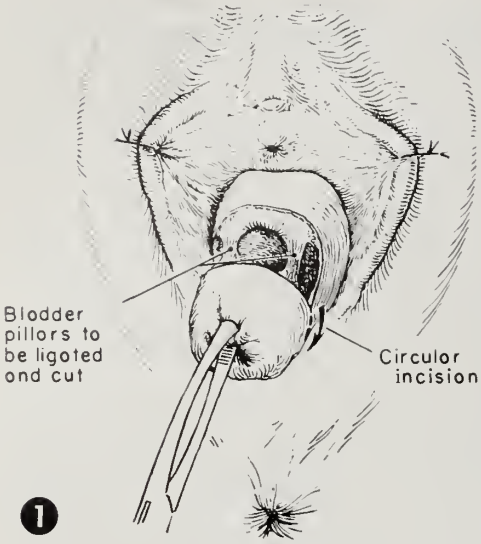
The uterine vessels on either side are isolated and doubly ligated. These ligatures are not held.

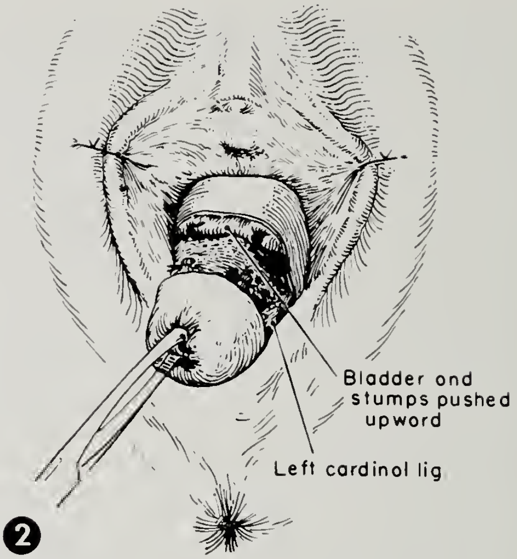
The uterus is pulled further downward until the broad, round, and ovarian ligaments are brought into view. One clamp is placed from above downward and the other from below upward, and these ligaments are severed and doubly ligated. The same procedure is carried out on the opposite side (figure 6), and the uterus is cut free and removed. The sutures on these ligaments are tagged with Kelly clamps.

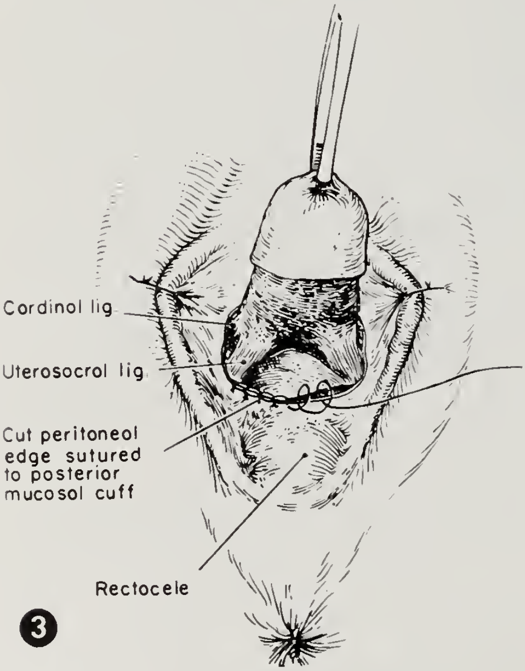
If an enterocele is present, it is dissected out and excised at this time. Then, both uterosacral ligaments are approximated in the midline with 3 or 4 interrupted sutures which close the cul-de-sac and prevent recurrence. If no enterocele is present, the latter step is not necessary. All pedicles are left tagged with their respective clamps for future identification.

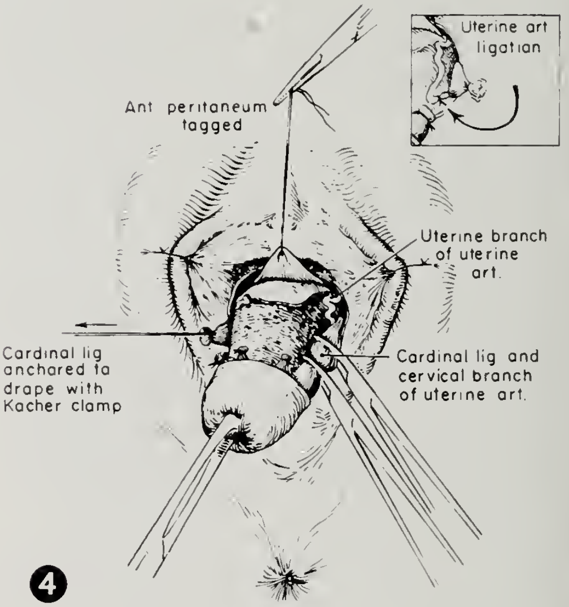
The suture on the anterior peritoneum is now lowered. The anterior vaginal mucosa is grasped with Allis clamps and pulled downward. Scissors are introduced beneath the mucosa to separate it from the bladder. The anterior mucosa is then incised in the midline up to the urethral orifice (figure 7).

One lower cut edge of the mucosa is grasped with tissue forceps, and the musculofascial layer is separated from the mucosa for a distance of about 1 cm. Scissors are introduced between this layer and mucosa, and dissection may be carried up in this avascular plane as high as the urethra (figure 8). The same procedure is carried out on the opposite side. If the patient has stress incon-


Bladder pillars to be ligated and cut
Circular incision
1


Bladder and stumps pushed upward
Left cardinal lig
2


Cardinal lig
Uterosacral lig
Cut peritoneal edge sutured to posterior mucosal cuff
Rectocele
3


Uterine art ligation
Ant peritoneum tagged
Uterine branch of uterine art.
Cardinal lig anchored to drape with Kocher clamp
Cardinal lig and cervical branch of uterine art.
4

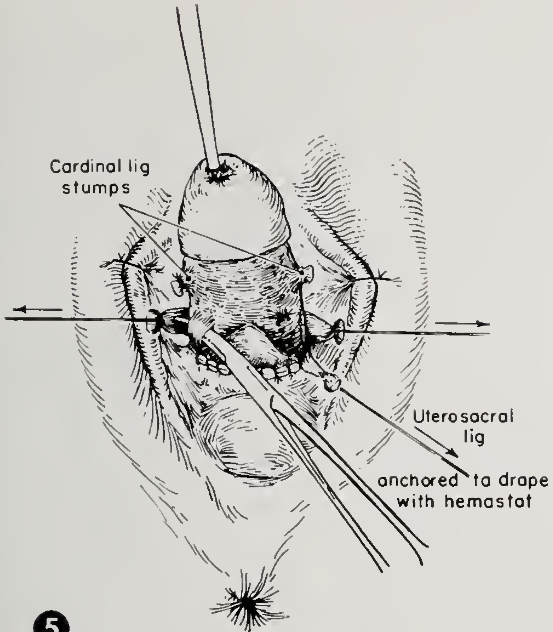
All drawings by William Loechel

FIG. 1. The circular incision has been made anteriorly and its direction indicated. The mucosa has been pushed back exposing the bladder pillars. The method of suturing the labia can also be seen.

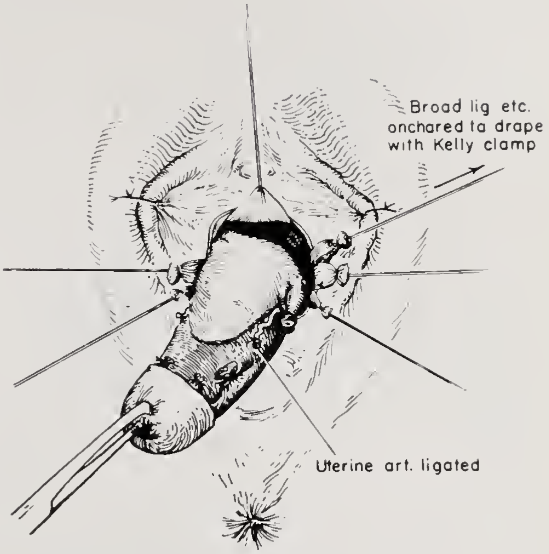
FIG. 2. The bladder pillars have been divided and the mucosa further pushed back, exposing the cardinal ligaments.

FIG. 3. The posterior aspect of the cervix is seen. The uterosacral ligaments are exposed, and the peritoneum is open. The method of anchoring the peritoneum to the posterior vaginal cuff is demonstrated.

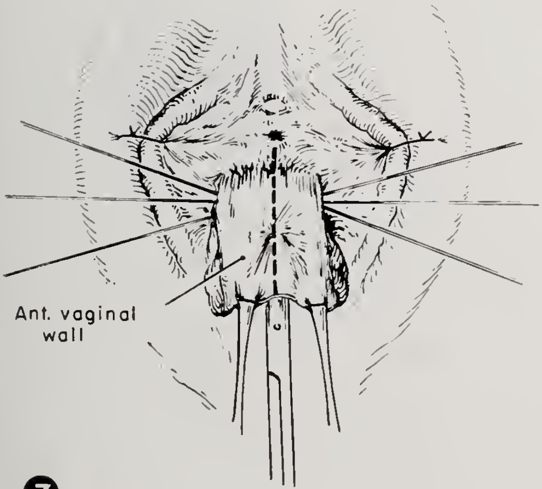
FIG. 4. The method of clamping the cardinal ligament is shown. One side has already been cut and ligated. The relation of the cardinal ligament to the uterine artery is shown in the main drawing and clarified in the insert. The vesicouterine fold of peritoneum has been opened and identified before clamping.


Cardinal lig stumps
Uterosacral lig
anchored ta drape with hemostat

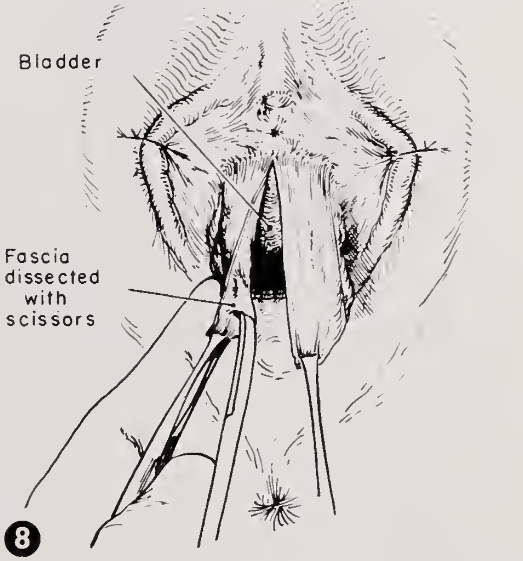
❺


Broad lig etc. onchared ta drape with Kelly clamp
Uterine art. ligated

❻


Ant. vaginal wall

❼


Bladder
Fascia dissected with scissors

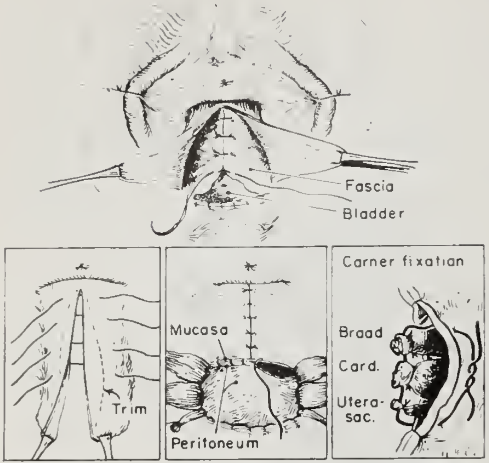
❽

FIG. 5. The uterus is shown in its posterior aspect. The cardinal ligaments have been severed as has the left uterosacral ligament. The right uterosacral ligament is being identified before clamping.

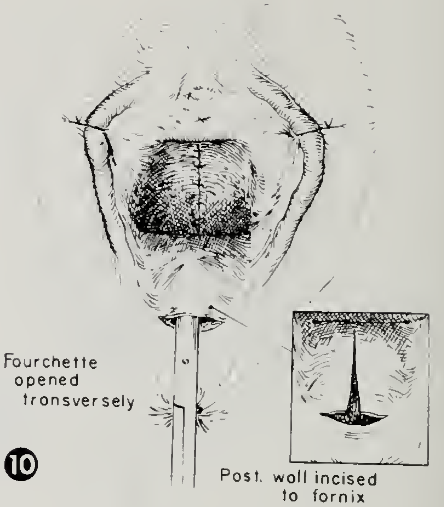
FIG. 6. The uterus is shown attached only by the right broad ligament and its contained structures. The left broad ligament has been clamped, cut, and ligated. This may require more than one step if these structures are not involuted.

FIG. 7. The anterior vaginal mucosa has been inverted and is under tension. Scissors are being introduced between vagina and bladder with the tips directed toward the vaginal mucosa. The sutures of the pedicles from the hysterectomy are also shown.

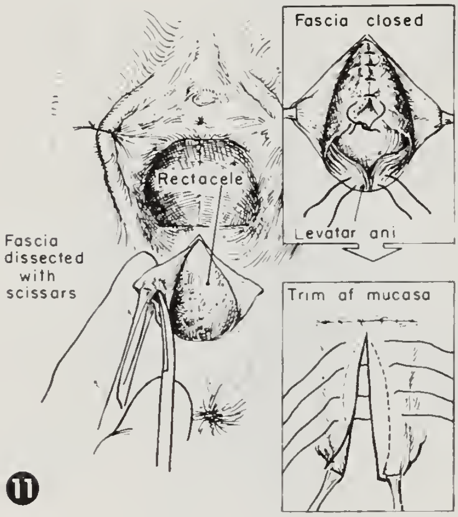
FIG. 8. The anterior vaginal wall has been opened in the midline and the bladder can be seen. Scissors are being introduced into the avascular plane beneath the outer layer of the mucosa with opposing pressure from the index finger.


Fascia
Bladder
Trim
Mucosa
Peritoneum
Corner fixation
Broad
Card.
Utero-sac.

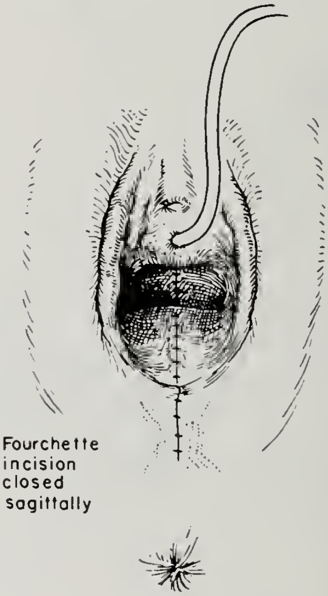
9


Fourchette opened transversely
Post. wall incised to fornix

10


Rectocele
Fascia dissected with scissors
Fascia closed
Levator ani
Trim of mucosa

11


Fourchette incision closed sagittally

12

FIG. 9. The musculofascial "sling" is being sutured with interrupted sutures. The first insert illustrates the method of trimming the mucosa which is then closed with interrupted sutures. The center insert shows the mucosa closed. The anterior peritoneum is being sutured to the closed anterior vaginal cuff. The last insert illustrates the method of supporting the lateral angle of the vagina.

FIG. 10. The transverse incision in the area of the fourchette is shown. Scissors are being introduced between the vagina and rectum with the tips pointed toward the vaginal mucosa. The insert shows the midline mucosal incision extending almost to the suture line of the posterior cuff.

FIG. 11. The method of introducing the scissors into the avascular plane is shown. Note that this is done against the index finger. In the top insert the musculofascial "roof" is being closed over the rectocele with interrupted sutures. The pubococcygeal portions of the levator ani muscles have been dissected fully, and sutures have been placed into them and tagged. The lower insert shows the method of trimming the mucosa, which is then closed with interrupted sutures.

FIG. 12. The operation has been completed, and the Foley catheter is in place. Note that the approximated levator ani muscles build up the relaxed perineum. It is from this that the repaired perineal and pelvic floors get their main support. The gauze packing mentioned in the text has been omitted.

tinence, several Kelly sutures are taken at this time. Otherwise, the musculofascial layer is brought together in the midline with interrupted no. 0 chromic catgut sutures. The excess anterior vaginal mucosa is now trimmed off in an elliptical fashion on either side and the mucosa approximated with interrupted sutures (figure 9).

The tagged anterior peritoneum is now approximated to the closed anterior vaginal wall with several sutures, taken in a transverse manner. A suture is now introduced through a lateral angle of the cuff, starting in the anterior vaginal wall, incorporating the pedicles of the round, broad, cardinal, and uterosacral ligaments, and out through the posterior vaginal wall. The same step is done on the opposite side. When these sutures are tied the vagina is supported, the peritoneal layers are in apposition, the vaginal length is maintained, and there is no danger of future prolapse of the vaginal wall. Several interrupted sutures are taken medially to the angle sutures, and the center of the vaginal cuff is left open for drainage. One end of a piece of 1-inch iodoform packing is introduced through the cuff for a distance of about 2 cm. to act as a drain. The remainder of the packing is placed on the patient's abdomen for later use.

The posterior repair is done by making an incision of several cm. at the mucocutaneous junction. Scar tissue is incised and freed, and the scissors are introduced beneath the posterior vaginal mucosa in the midline. The dissection is carried up to the crest of the rectocele (figure 10). This incision approximates the sutures of the posterior vaginal cuff. One lower edge of the cut posterior mucosa is picked up with tissue forceps, and the pararectal musculofascial layer is developed. Scissors are introduced into the plane of dissection, which is relatively avascular, and the separation can be carried as high as the rectocele crest (figure 11). The same procedure is done on the opposite side. The musculofascial layer is not as prominent posteriorly as it is anteriorly, but, nevertheless, is easily identifiable. This layer is brought together in the midline with interrupted sutures, starting at the rectocele prominence and continuing down toward the introitus. At this point the pubococcygeal portions of the levator muscles are dissected out, at the lower lateral angles of the vagina. Several interrupted sutures are placed in them, but they are not tied at this time. The excess vaginal mucosa is removed in an elliptical form and the mucosa approximated with a running, lock suture. The levator sutures are now tied, thus building the perineum. A double-0 chromic catgut suture is started as a crown stitch, uniting the 2 sphincter cunei muscles. It is then continued down, incorporating the transverse perineal muscles and the diaphragmatic fascia. This suture is locked at the anal end, then continued up as a subcuticular suture which is tied to the crown stitch. The remainder of the iodoform packing is inserted into the vagina, and a Foley catheter is placed into the bladder (figure 12).

POSTOPERATIVE CARE

The vaginal packing is removed in 24 hours. The Foley catheter is left in the bladder for 5 days. It is irrigated with sterile water twice a day. The catheter is clamped on the second postoperative day and the bladder allowed to fill. It is unclamped periodically to empty the bladder. This procedure helps regain bladder tone.

Sulfisoxazole, 1 Gm. q.i.d., is given until the bladder is functioning normally. This drug aids to prevent cystitis. Triple sulfa cream, instilled into the vagina daily, starting on the first postoperative day, aids in minimizing the vaginal discharge and promotes healing.

The catheter is removed on the fifth postoperative day, and the patient is catheterized after each voiding until the residual urine is less than 30 ml.

A laxative is given on the first postoperative night and repeated as necessary. Enemas are given when needed.

The patient is ambulatory on the second postoperative day and may leave the hospital any time after the fifth day, as soon as the bladder functions properly.

From April, 1956 to March, 1961, 37 operations employing this technic have been performed (tables 1, 2 and 3). All of the patients presented the primary complaints of genital prolapse of varying degrees. Although the number is small, we have been impressed by the uniformly good anatomic and functional results obtained. There were no shortened vaginas, and no patient complained of dyspareunia. The youngest patient in this series was 32 years of age and the oldest was 80. The average age was 49 years.

TABLE 1

Age Distribution

Age Group	No. of Cases	Per cent
Under 40	4	10
41 to 50	10	27
51 to 60	10	27
61 to 70	10	27
71 and over	3	8

TABLE 2

Operations Performed

Procedure	No. of Cases	Per cent
Vaginal hysterectomy as sole procedure	1	2
Vaginal hysterectomy and perineorrhaphy	5	13
Vaginal hysterectomy and A and P repair	29	78
Hysterocolpectomy	2	5

Twenty-three of the 37 patients required blood transfusions; 17 received 1 unit of whole blood and 6 received 2 units. The morbidity rate in this series was 18 per cent (7 patients) and included all patients with a temperature of 100.4° F or higher on any 2 postoperative days excluding the first 24 hours. There were 4 complications of the procedure: vulvar abscess (1); perirectal abscess (1); pyelonephritis (1); and ureterovaginal fistula (1). The latter complication occurred on the eighth postoperative day in a patient with carcinoma of the cervix. Preoperative biopsy showed carcinoma in situ, but the tissue examined subsequently showed infiltrating carcinoma.

All catheters were removed on the fifth postoperative day. Eight patients showed no residual urine on the first voiding. One patient did not empty her bladder completely until the catheter had been removed 18 days. The average patient voided satisfactorily on the eighth postoperative day or 3 days after the catheter was removed. In 4 patients, it was necessary to reinsert the Foley after it had been out for 2 to 3 days.

TABLE 3

Pathologic Findings

	No. of Cases	Per cent
Body of Uterus:		
Myoma uteri	8	21
Myoma and adenomyosis	2	5
Adenomyosis	4	10
Cervix:		
Chronic cervicitis	25	67
Endocervical polyp	3	8
Carcinoma of cervix	1	2
Ovaries:		
Corpus luteum cyst	1	2

The average hospital stay was 11 days. The shortest hospitalization was 6 days and the longest 36 days in the individual with the ureterovaginal fistula.

SUMMARY

An operative technic for vaginal hysterectomy has been presented with the use of illustrations to clarify each step.

Strict adherence to technic will result in a good repair with minimal blood loss.

Thirty-seven patients were operated upon by this method and the results have been good.

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(*Continued on page 504*)

Congenital Bacterial Pneumonia

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SINCE SILBERMANN'S ORIGINAL REPORT[1] in 1884 describing pneumonia as a cause of death in stillborn and newborn infants, reports from autopsy reviews have confirmed the presence of pulmonary inflammation in the very early neonatal period.[2-5] The intrauterine origin of pneumonia in the stillborn is obvious; pneumonia as a cause of death within the first several days of life can most probably be classified as intrauterine in origin. Congenital pneumonia indicates pneumonia of intrauterine origin. While approximately 10 per cent of all deaths in the stillborn-newborn category are due to pneumonia,[6] the diagnosis is most often made from autopsy material. Attention has been focused on congenital pneumonia by Schaffer,[5] who demonstrated that the diagnosis can be made clinically and that the prognosis is not necessarily hopeless. However, a review of the clinical and autopsy records of Providence Hospital for the past 5½ years demonstrated that the diagnosis is most often made by the pathologist. In view of this fact it is believed that the entire picture of pneumonia in the very early neonatal period should be reviewed and brought to the attention of practicing physicians.

REVIEW OF HOSPITAL RECORDS

The clinical records and autopsy reports of Providence Hospital from 1955 to 1960 were reviewed. The age of infants in this study has been limited to 7 days or less, except for those in which the symptoms of pneumonia were present within the first 7 days of life and in whom pneumonia was considered the primary cause of death; stillborns were included. A total number of 317 autopsies were reviewed, in which 22 cases were diagnosed, producing a figure of 6.9 per cent. However, since there is a total lack of clinical data on 1 case, only 21 cases will be summarized in this report. In addition, 2 cases were clinically recognized, and the patients were successfully treated and are reported to demonstrate the picture of pneumonia.

REPORT OF CASES

Case 1. A full-term, 6 lb., 14 oz. (2,837.5 Gm.) female infant was born to a 22-year-old primipara whose pregnancy was uncomplicated. The total length of labor was 5 hours. The membranes ruptured spontaneously 2 hours before delivery. Meconium was present in the amniotic fluid. On one occasion during labor the fetal heart slowed greatly. The mother was type O, Rh +. Respirations were established 3 minutes after birth; positive pressure oxygen was employed. However, the infant seemed pale and rather sluggish and had a very weak cry. At this time no rales were present, the heart tones were good, and no evidence of meconium-staining of the skin or nails was noted. The infant was immediately placed in an Isolette and given oxygen, high humidity, Hykinone, and intramuscular penicillin. Within a few hours after birth slate gray cyanosis and rapid respirations without retractions appeared. The deep tendon reflexes were present but sluggish. Within 12 hours after birth low-grade fever appeared (101°F). Erythromycin, 100 mg. every 4 hours, was added to the original penicillin therapy. On the second day of life a suggestion of rales was heard in both lung bases, and the rectal temperature rose to 104.4°F. Chest X-ray films revealed minimal scattered infiltrations in both lung fields and a spina bifida occulta involving the fifth, sixth and seventh thoracic vertebral bodies. Since the infant was unable to suck effectively intravenous fluids were started. After a full week of treatment the cyanosis gradually lessened, sucking became more effective, and the chest X-ray film showed some clearing. Treatment was continued for 6 more days before discharge.

Case 2. A full-term, 5 lb., 14 oz. (2,667.3 Gm.) infant was born to a 30-year-old multipara, gravida VII, Para VI. The prenatal course was uneventful. The total length of labor was 15 hours, 17 minutes. The membranes ruptured 2½ hours before delivery. At the time of birth the umbilical cord was wrapped once around the neck of the infant. Respirations were established 5 minutes after birth. The infant required frequent suctioning, intubation, and positive pressure oxygen. Even after respirations had been established gray cyanosis persisted and remained until the thirteenth day of life. Crepitant rales were heard throughout the lung fields shortly after birth and persisted until the eleventh day of life. The rales cleared 48 hours before the infant's color improved. Respirations were tachypneic, without retractions, until improvement in the chest was noted. Immediate treatment consisted of the use of an Isolette with increased humidity, oxygen, and Hykinone. Dicrysticin, Chloromycetin and Terramycin were started shortly after birth; Chloromycetin and Terramycin were discontinued after 7 days of treatment. Dicrysticin was continued until discharge from the hospital on the eighteenth day of life. Chest X-ray films on 2 occasions revealed prominent bronchovascular markings without any evidence of infiltration. During the first 11 to 13 days the infant was critically ill; the cry was poor, the sucking ineffectual, and there were generalized flaccidity and sluggishness.

CLINICAL ASPECTS

Twenty-one cases of neonatal pneumonia have been reviewed. Nine (43 per cent) of these infants were premature and required a resuscitation varying from 3 to 30 minutes. Prolonged resuscitative measures were required more frequently in the full-term than in the premature infant. In 18 cases (86 per cent) the symptoms dated from the time of birth, and the remaining 3 had their respective onsets at 48, 72, and 120 hours of life. Although 120 hours seems to be a rather long incubation period, the intrauterine origin of pneumonia in this particular case was demonstrated by the lack of fibrin deposit in the lungs on microscopic sections. The infants sick from the time of birth were cyanotic; those with delayed onset became cyanotic shortly after the onset of symptoms. Cyanosis is the single symptom, which was present in 100 per cent of cases. Approximately 50 per cent of the infants were tachypneic (50 to 100 respirations per minute). Dyspnea in the form of retractions or rapid, grunting respirations occurred in over 70 per cent of cases. A minimal degree of infrasternal retraction accompanied by rapid, shallow respiration and cyanosis describes most typically the picture of neonatal pneumonia. Periods of apnea and gross irregularity of respiration tended to occur as the infant's general condition deteriorated. Cough was totally absent from the clinical picture in both premature and full-term infants. The cry was notably weak in 8 cases (38 per cent). Fever was present in only 6 cases and was more common in the full-term group. Most of the temperature recordings ranged between 100.0 and 101.0°F. One premature infant (2,450 Gm.) developed fever on the third day of life which progressively rose to 106.2°F at the termination of the illness. Neurologic complications observed in 10 cases (47.6 per cent) included lethargy, diminished or absent deep tendon reflexes, flaccidity, absence of the Moro reflex, muscle twitchings, and tonic and clonic convulsions (generalized or one-sided). Rales were present in only 7 cases and cannot be relied upon as a constant sign. The most frequent laboratory procedures which are employed are hemograms, throat cultures, and blood cultures. In this series 8 infants were studied by hemograms.

No abnormalities of hemoglobin or hematocrit were encountered. However, 6 of the 8 showed leukocytosis varying from 29,600 to 44,600, each accompanied by a shift to the left. The highest white blood cell counts occurred in the premature infants. Unfortunately, the records reveal only 2 cases in which throat cultures were made and which did not show pathogenic bacteria. It must be noted that bacteria which are not ordinarily considered pathogens in the adult or older child may be capable of causing infection in the premature or full-term infant. Blood cultures were obtained from only 2 infants; neither was positive. Hemolytic *Staphylococcus aureus* was recovered in postmortem blood cultures obtained from 1 of these cases. Umbilical cord smears revealed nonhemolytic *Staphylococcus aureus* in 1 additional case. Microscopic sections of the pulmonary tissues in 2 cases showed clusters of gram-negative rods, most probably *E. coli*. The major reason for the lack of cultures is the lack of suspicion of infection. The tendency is great to attribute the symptom-complex of cyanosis, dyspnea and flaccidity in the newborn infant to atelectasis alone, intrauterine anoxia alone, or to "prematurity and atelectasis."

Two cases of prolonged labor were noted in this series—1, 65 hours in a primipara, and the other 20 hours and 20 minutes in a multipara. In the 4 cases of prolonged membrane rupture-time antibacterial therapy was given as follows: (1) none; (2) Gantrisin, 4 Gm. daily until delivery (14 days); (3) Terramycin, 1 Gm. per 24-hour period until delivery (42 hours); and (4) combined intramuscular penicillin-streptomycin therapy for the first 5 days followed by an unnamed sulfa drug in full theraputic dosage until delivery (total of 11 days). The following maternal complications were also found: breech presentation (5), bleeding for a 48-hour period before delivery, 2 weeks before the onset of labor (1), toxemia and hydramnios combined (1), more than a 30-pound weight gain (2), mumps at the time of delivery (1), maternal pyrexia without other clinical or laboratory evidence of infection (1), placenta praevia (1), and a 32,500 leukocyte count in the peripheral blood with a marked shift to the left unaccompanied by any clinical abnormalities (1).

Differential Diagnosis

The differential diagnosis includes (1) hyaline membrane disease, (2) lobar atelectasis, (3) pneumothorax, (4) pneumomediastinum, (5) tumors or cysts of the lung or mediastinum, (6) diaphragmatic hernia, (7) paralysis of the phrenic nerve, (8) tracheo-esophageal fistula, (9) choanal atresia, (10) lobar emphysema, (11) pulmonary hypoplasia, (12) intra-alveolar hemorrhage, (13) disturbances of the central nervous system, (14) malformations of the lower jaw, epiglottis and larynx, (15) sepsis, and (16) congenital heart disease. Frequently one or more of these conditions will be present concurrently with pneumonia. Only a few conditions are of importance in the differential of uncomplicated pneumonia. Hyaline membrane disease may be manifest at birth or more commonly may be delayed for several hours following birth. It is characterized by increasingly labored respirations accompanied by increasing cyanosis. The respiratory movements are very similar to those seen in bronchiolitis and are in direct contrast to those usually seen in pneumonia. The infant with pneumonia most often evidences rapid, less labored respiratory excursions and deep cyanosis, both of which are present from birth. Periods of apnea may appear in each, however, as the general condition becomes more critical. The X-ray examination serves to differentiate these and other conditions. Whereas the findings in pneumonia are limited to either an increase in the bronchovascular markings or the presence of infiltrations, hyaline-membrane disease reveals initially a generalized, finely reticulated ("ground glass") pattern which progressively becomes confluent, resulting in opacification of the lung fields. Occasionally hyaline-membrane disease and pneumonia will be present concurrently from birth; in this instance both cyanosis and markedly labored respirations will be immediately present. Congenital heart disease without congestive failure may be very difficult to differentiate. The chest X-ray findings may point to an abnormal cardiac silhouette. However, an abnormal cardiac configuration and the appearance of cardiac murmurs may be delayed for several months after birth. The appearance of cardiac failure may help in the differential diagnosis but is not pathognomonic of congenital heart disease. Disturbances of the central nervous system can usually be ruled out by the finding of abnormalities in the chest on physical examination, radiographic evidence of pulmonary disease, normal cerebrospinal fluid, and the transitory nature of the neurologic abnormalities which are encountered.

NECROPSY ASPECTS

The gross examination of the lungs and palpation cannot be relied upon to give an accurate indication of the underlying process. Patchy atelectasis, variations in the concentration of leukocytes in different portions of lung tissue, infiltration by large numbers of inflammatory cells and overdistention of alveoli by large numbers of aspirated epithelial cells are grossly indistinguishable. Microscopic examination will reveal the typical picture of intra-uterine pneumonia. The presence of fluid containing polymorphonuclear leukocytes in the alveoli of the lung in itself does not constitute the picture of pneumonia; definite fetal leukocytic reaction must be present in the adjacent alveolar wall. From the standpoint of the pathologist one of the major aids in establishing the origin of pneumonia is the presence or absence of fibrin. Fibrin is very rarely present in lung tissue in which the pneumonic process originates in utero.[7] Diffuse intra-alveolar hemorrhage is a condition of disputed etiology, usually occurring in infants of birth weight of 2,000 Gm. or less, which is frequently reported "hemorrhagic pneumonia" or "hemorrhagic bronchopneumonia." The term pneumonia has been and is still used even though cells of leukocytic origin are not present.[7] The possibility exists that severe anoxia (intra-uterine or extra-uterine), early bacterial invasion, or more immaturity of the pulmonary vascular bed with rupture of capillaries allows hemorrhage to occur into alveoli. Intra-alveolar hemorrhage should not be classified with pneumonias, therefore, until an infectious or inflammatory origin can be demonstrated.

DISCUSSION

Although some questions still remain unanswered, much has been learned about the pathogenesis of intra-uterine pneumonia and other infections of intra-uterine origin through critical analyses of data and clinical studies within the past 5 years.

TABLE 1

Maternal Symptoms

Birth Wt. of Infant in Gm.	No. of Cases	Prolonged Labor	Premature Membrane Rupture	Breech Presentation	Hydramnios	Bleeding	Fever	Infectious Disease	URI	Leukocytosis	Toxemia	Cesarean Section	Great Wt. Gain	More Than 1 Complication	Maternal Antibiotics
2,500 or less	9	1	3	3	1	1	1	1	0	0	1	0	1	4	2
2,501–3,000	7	0	1	2	0	0	1	0	0	1	0	0	0	0	1
3,001–3,500	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0
3,501–4,000 or more	2	1	1	0	0	1	0	0	1	0	0	1	0	1	0
Totals	21	2	5	5	1	2	2	1	1	1	1	1	2	5	3

Maternal factors (see table 1). Potter and Adair[8] presented evidence that deaths among infants in the first 10 days of life are almost always due to conditions occurring before and during birth and are rarely due to intrinsic fetal factors other than congenital abnormalities incompatible with life. Previous knowledge includes neonatal pneumonia which can occur in infants born of normal as well as abnormal pregnancies and labors, amniotic fluid which may be contaminated after the onset of labor even though the membranes are intact, and the amnion and chorion which frequently become infiltrated by leukocytes within several hours after membrane rupture.[9] The significant abnormal maternal conditions are the following: (1) prolonged membrane rupture time, (2) prolonged labor, (3) mechanically difficult delivery, (4) hemorrhage, (5) hydramnios, (6) infections, (7) multiple pregnancy (twinning), (8) toxemia, (9) extraction by other than low forceps (mid-forceps, version and extraction), (10) breech presentation, (11) spasmodic contraction of the uterus, (12) uterine inertia, (13) metabolic disease (diabetes), and (14) cesarean section. Prolonged membrane rupture time and prolonged labor are those most frequently associated with intra-uterine infection and neonatal morbidity. Application of this basic knowledge and its correlation with clinical studies and statistical data have produced 4 cardinal principles: (1) fetal infection, which is almost always associated with infection or contamination of amniotic fluid, the "amniotic infection syndrome"; (2) infection of the uterine contents, which almost always occurs through the ascending route; (3) maternal reaction to infection, which occurs before a similar reaction in the fetus, and (4) the microörganisms responsible for infection of the uterine contents, which are always identical to those found in the birth canal.

Clinically, prolonged membrane rupture and prolonged labor need not necessarily precede intra-uterine infection. Both fungi and bacteria may occur in cases in which labor has been absolutely uneventful.

Evidence in favor of the ascending type of infection has been demonstrated by clinical and morphologic data. The amniotic fluid is sterile, and the fetal adnexa show no evidence of polymorphonuclear infiltration in elective cesarean sections. Sterility of the amniotic fluid is maintained in abortions, provided that the membranes remain intact and that no evidence of inflammation in the placenta is demonstrated.[10] In twin pregnancies, when intra-uterine infection occurs, the amniotic sac of the first-born twin is always the one infected.[11] Morphologically, maternal infection occurs most frequently as an inferior pole membranitis and least frequently as central inflammation of the placenta.[10] It has been suggested that a "suction effect" through the dilated cervix created by strong active uterine contractions may aid bacteria in their progressively ascending route.[12]

Maternal reaction to infection will occur earlier than fetal reaction and in a number of instances will occur in the absence of fetal infection. The absence of fetal reaction in some cases reveals 2 significant observations: (1) maternal reaction to infection, which does not imply fetal infection but merely demonstrates fetal exposure to infection, and (2) rather extensive maternal reaction which can be present in instances in which prematurity or immaturity may be responsible for the lack of fetal response. Maternal temperature elevations over 98.6°F (oral), even though minimal, and fetal tachycardia were found to be associated frequently with placental inflammation; every case of congenital pneumonia in Smith's series[13] was associated with maternal pyrexia.

E. coli, *Str. faecalis*, hemolytic and nonhemolytic *Staph. albus*, and hemolytic and nonhemolytic *Staph. aureus* are the most common invaders of the amniotic fluid. Bacteriologic studies have revealed that the organisms recovered from amniotic fluid, cord blood, fetal blood and fetal organs are the same as those found in the birth canal.[10]

Fetal factors (see table 2). Bacterial invasion of the fetal lungs may occur through 2 separate mechanisms: (1) most frequently through direct invasion of the pulmonary tissues when in contact with contaminated amniotic fluid, and (2) by the hematogenous route. Invasion of the fetal circulatory system may be secondary to invasion of the wall of the intestinal tract or through transfer of bacteria from the site of maternal infection directly through the umbilical cord vessels.

Direct pulmonary bacterial invasion necessitates fetal ability to bring contaminated amniotic fluid into the respiratory tree. Fetuses at or near term evidence periodic respiratory movements for varying periods of time. Studies with Thorotrast injected into the amniotic sac indicate that these movements are effective in causing interchange between the amniotic sac contents and the fluid contents of the fetal respiratory tract.[14, 15] Thus, the tidal flow of contaminated amniotic fluid can set the stage for fetal invasion. Many of the obstetrical complications associated with fetal and neonatal pneumonia and other intra-uterine infections are accompanied by, or produce exaggeration of the fetal respiratory-like movements. Hypoxia and anoxia are usually considered the most significant factors in producing increased fetal respiratory activity, but recent studies seem to indicate that hypoxia, anoxia and hypercapnia do not stimulate any marked degree of increased respiratory activity on the part of the fetus at term.[16, 17] The only conclusion that can be reached is that a variety of stimuli may be operative in initiating intra-uterine fetal respiratory activity.

TABLE 2

Neonatal Symptoms

Birth Wt. of Infant in Gm.	No. of Cases	Cyanosis	Neurologic Signs	Fever	Weak Cry	Rales	Onset of Symptoms		Dyspnea	Apnea	Tachypnea	Leukocytosis	Prolonged Resuscitation	Spontaneous Respiration	Pallor	Congenital Abnormalities
							From Birth	Delayed								
2,500 or less	9	9	2	2	4	3	7	2	8	1	4	4	2	6	1	3
2,501–3,000	7	7	5	4	3	2	6	1	3	2	3	1	4	3	2	3
3,001–3,500	3	3	2	0	1	2	3	0	3	1	1	1	2	1	1	0
3,501–4,000 or more	2	2	1	0	0	0	2	0	1	1	2	0	1	1	0	1
Totals	21	21	10	6	8	7	18	3	15	5	10	6	9	11	4	7

Intermittent fetal swallowing movements are quite effective in moving amniotic fluid from the nose and mouth into the gastrointestinal tract. As a result of contact with infected amniotic fluid the walls of the intestinal tract may be subjected to bacterial invasion, with localized inflammation resulting. Eventual invasion of the fetal blood stream from these sites may produce sepsis and pneumonia. Meticulous examination of stillborn and neonatal autopsy material has revealed evidence of sinusitis, otitis media, gastritis, ileitis, colitis and peritonitis as possible precursors of fetal bloodstream infection.[18, 19]

Pneumonia is the most frequent cause of death in the premature infant after the first 3 days of life.[7] The incidence of pneumonia in infants weighing 2,500 Gm. or less is much higher than that in full-term infants, and with decreasing birth weight pneumonia occurs more frequently even in the absence of obstetrical complications. It may be possible that pulmonary immaturity with imperfections in the defense mechanisms accounts for the relative ease of bacterial invasion, or that abnormalities in selective placental transmission of maternal antibodies are at fault.

TREATMENT

The treatment of neonatal pneumonia is not complicated. The use of an incubator is essential for (1) stabilization of the infant's environment, (2) the effective use of oxygen therapy, and (3) the effective increase of moisture content of the oxygen-enriched atmosphere. Oxygen is indicated whenever cyanosis is present; care should be taken to keep the concentration of oxygen below 40 per cent. High humidity seems to be beneficial; distilled water without the addition of "wetting agents" is sufficient. Antibacterial therapy consisting of large doses of penicillin in combination with full therapeutic dosage of a broad-spectrum antibiotic is indicated as soon as the diagnosis is made or suspected. The injectable route is preferable to the oral route. Cultures should be obtained before the start of treatment. Antibacterial therapy should be guided by sensitivity studies whenever possible. The infant's general condition determines the method of feeding. Intravenous maintenance is mandatory in those infants with marked respiratory difficulty. When the general condition permits feeding may be given through an indwelling nasogastric tube. As progress occurs, nipple feeding can be substituted. Complications are treated as they arise. Cardiac failure requires prompt digitalization by the use of a rapidly acting digitalis preparation (Cedilanid or Digoxin are preferred). The appearance of progressive anemia and/or surgical complications are most often indicative of pneumonia of staphylococcal origin in this age group. The most common surgical complications are empyema and pulmonary abscesses, single or multiple.[20]

Prevention and Prophylaxis

Pneumonia as the sole cause of death in the neonatal period is progressively decreasing in incidence. Only 2.5 per cent of all neonatal deaths in the District of Columbia in 1959 were due to pneumonia.[21] Of this group 14 occurred in infants 1 week of age or less. The most important common denominator in the reduction of neonatal pneumonia is progressively improving obstetrical care.

When the membranes have ruptured long before the onset of labor, what course of action should be followed? Should antibacterial treatment be started and continued until the time of delivery, or should it be withheld pending the development of obvious signs of maternal infection such as pyrexia, tachycardia, or purulent vaginal discharge? Both courses of action have their advocates. The present status of maternal prophylactic antibacterial therapy is disappointing. Penicillin alone,[22, 23] sulfamerazine alone,[24] and combinations of penicillin and streptomycin,[25] erythromycin and Gantrisin,[25] and streptomycin and oxytetracycline[13] have been tested or suggested with generally poor results. Intra-uterine pneumonias occur even when maternal prophylactic administration of antibiotics at full theraputic levels has been continued from the time of premature membrane rupture until delivery. Maternal prophylactic treatment may not actually be adequate in some of these cases. Significant fetal blood levels of antibiotics are not obtained unless maternal treatment consists of 2 to 3 times the usual therapeutic dosage for at least a 48-hour period.[26] Continuous antibacterial treatment could be instrumental in producing infections due to antibiotic-resistant strains of bacteria. Rotation of varied antibiotics and sulfonamide drugs may prevent the emergence of resistant strains. On the other hand, some investigators[27] believe that the onset of intra-uterine infection occurs simultaneously with the onset of labor. They advocate the withholding of antibiotic therapy even though membrane rupture time exceeds 72 hours in the absence of labor. Reliance is placed on good general hygienic measures. Should conditions warrant, induction of labor following premature membrane rupture is an extremely important factor under the control of the obstetrician in reducing the incidence of intra-uterine infections. Membrane-rupture time during active labor should also receive close scrutiny. In almost all incidences antimicrobial therapy is started when membrane-rupture time reaches 12 hours. Evidence exists, however, that membrane-rupture time of only 6 hours is attended by a great increase in the incidence of intra-uterine pneumonias,[5] particularly when the infant's birth weight is 2,500 Gm. or less. It is suggested, therefore, in every instance involving delivery of a premature infant that antibacterial treatment be started when membrane-rupture time reaches 6 hours.

One uncontrollable factor may be operative. It is well established that transient maternal bacteremia may occur when detachment of the placenta from the uterine wall begins in the third stage of labor.[10] It is entirely possible that any disturbances of the placental attachment to the uterine wall may account for transient maternal bacteremia and transplacental transfer of microörganisms to the fetal circulation. Likewise, manual vaginal examinations should be restricted to a bare minimum. From the obstetrical standpoint nothing will replace good clinical judgment in the reduction of intra-uterine infections.

In the neonate the diagnosis of pneumonia is relatively difficult to make. It is obvious that no difficulty in decision should arise in the treatment of an infant with symptoms manifest at birth or within the first few hours after birth, and any infant providing the examiner a high index of suspicion of infection should be treated. More basic information, however, should be provided for determining the need for antimicrobial therapy or its continuance, once it has been started. Two technics for this determination are available: (1) microscopic examination of frozen sections of the umbilical cord for evidence of leukocytic infiltration in the wall of the umbilical vein,[11] and (2) microscopic examination of a "whole mount" of amnion for evidence of leukocytic infiltration.[10] Both of these methods are rapidly performed and require no special instruments. Results in either method are obtainable within 1 hour after receipt of the specimen. There should be no need for prophylactic therapy in the neonate or for routine employment of these tests following the uncomplicated delivery of a full-term infant unless a high index of suspicion of fetal infection were aroused. Following obstetrical complications and following every instance in which a premature infant is delivered, microscopic examination of either the umbilical cord (multiple sections) or amnion should be performed. Positive evidence of inflammation (leukocytic infiltration) in either of these structures would indicate that antibacterial therapy should be started or should be continued if it had already been started. It must be noted that these principles do not apply specifically to congenital pneumonia alone. Application of antibacterial therapy as indicated by microscopic examination of the fetal adnexa will no doubt serve as well to decrease the incidence of sepsis, otitis media, gastritis, ileitis, peritonitis and meningitis of intra-uterine origin.

SUMMARY

The incidence and pathogenesis of neonatal pneumonia have been reviewed. The diagnosis of pneumonia in the neonate will be made more frequently if it is but kept in mind. The most common source of intra-uterine pneumonia is fetal inhalation of infected or contaminated amniotic fluid; the bacteria responsible for invasion of the amniotic fluid are in all instances those present in the birth canal. For determination of fetal exposure to infection and for the use of an indicator to determine when prophylactic antibacterial treatment of the neonate is indicated, emphasis is once again placed on microscopic examination of either the amnion or multiple sections of the umbilical cord.

N.B. The author is indebted to Dr. Louis L. Cross, Chief of the Department of Pediatrics, Providence Hospital, for permission to use the clinical records of case no. 2 herein reported and to Mrs. Dail, Coding and Index Clerk, Record Room, Providence Hospital, for her most efficient help in procuring and reviewing clinical records with him.

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The Role of Adequate Hydration in the Management of Neonatal Jaundice

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The value of exchange transfusions has been established in the treatment of hemolytic disease and other hyperbilirubinemias occurring in the newborn. This procedure accomplishes the removal of free antibody, sensitized erythrocytes and bilirubin from the infant's circulation, and the replacement with fresh red blood cells compatible with maternal antibody. In cases of severe isosensitization or a prolongation of the time between birth until the first exchange transfusion the incidence of repeat exchange transfusions increases. In both instances enough bilirubin diffuses into the tissues so that a single exchange may not adequately lower the total bilirubin level. Most workers in the field follow the dictum that an exchange transfusion should be repeated as often as is necessary to keep the serum indirect bilirubin below 20 mg. per cent.

Although the most severe neonatal hyperbilirubinemias are seen as a result of ABO and Rh isoimmunization the problem is not restricted to congenital hemolytic disease of the newborn. The rarest groups of hyperbilirubinemia are the specific entities, such as congenital sepsis, toxoplasmosis, cerebral anoxia, hematomas, etc. An intermediate group in incidence is the severely jaundiced infant at the age of 3 or 4 days of life with the indirect bilirubin over 20 mg. per cent, with the maternal and fetal blood groups compatible, the direct Coombs negative, and the hematocrit and hemoglobin values significantly elevated. Although this problem is seen in full-term infants, it is more common and striking in prematures. This is due to the depressed function of the glucuronyl transferase, the hepatic enzyme responsible for conjugation of indirect to direct bilirubin. The greater the prematurity the lesser the functioning capacity of this hepatic system. The peak of the hyperbilirubinemia commonly coincides with that observed in physiologic icterus neonatorum, and the clinical course is quite similar except for the high values of bilirubin. An exchange transfusion is usually performed in these cases to treat the hyperbilirubinemia. The similarity between this picture and dehydration with hemoconcentration is quite evident.

Despite the recognized value of the procedure, exchange transfusions are not without danger. Wheeler and Ambuel[1] emphasize that almost no major surgical operation performed in pediatrics outside of the neurologic field carries a higher operative mortality than exchange transfusion. Also, each repeat exchange produces marked alterations in the internal environment of the infant[2]; sudden death can always supervene, and much time of skilled workers is expended.[3]

Recently Kitchen, Krieger and Smith[3] reported the use of human albumin as an adjunct in exchange transfusion. The authors' theme is that any method which reduces the need of repeat exchanges demands serious and urgent consideration. They were able to demonstrate an increased bilirubin exchange achieved by the introduction of human albumin, a bilirubin-binding substance, into the blood stream of the infant prior to the exchange. Their results suggest that the necessity for repeat exchanges would be reduced by the addition of serum albumin in the early stages of the exchange and its maintenance at a high concentration throughout the procedure.

Several years ago one of us (L. C.) suggested the use of intravenous fluid therapy as an adjunct to exchange transfusion in congenital hemolytic disease and as the only treatment in instances of proven nonhemolytic jaundice. The purpose of this paper is to present a preliminary report on our experience with this therapeutic approach.

REPORT OF CASES

Case 1. D. O. was a white male infant born April 10, 1959 in another hospital. The birth weight was 7 lb., 2 oz. The mother is a gravida III, Para III, type B, Rh negative. The Coombs' test on the umbilical cord blood was positive. Previous pregnancies were normal. The baby was delivered spontaneously, but resuscitation was necessary, and he developed severe respiratory difficulty with short periods of apnea. Intercostal retractions and dyspnea persisted throughout the first 2 days of life. There was no visceromegaly. On April 12, 1959 the baby was transferred to Providence Hospital. On admission the hemoglobin was 14.4 Gm. and the total bilirubin 15.0 mg. per cent. A roentgenogram revealed diffuse reticular densities in both lungs. The next day the total bilirubin was 24.0 mg. At this point an exchange transfusion was considered but was ruled out because of the grave condition of the infant. The baby was started on broad spectrum antibiotics and intravenous administration of Levugen with electrolyte no. 48. On April 16, 1959, 3 days after admission, the bilirubin was 10 mg. and the intravenous fluids were discontinued. The baby was discharged 3 days later.

Case 2. B. F. was a white male infant born October 21, 1960, of a gravida I, Para I, type B, Rh positive mother. Because of premature separation of the placenta the infant was delivered with mid forceps. The birth weight was 5 lb., 9 oz. The baby presented facial abrasions, right facial palsy, and a cephalohematoma. The baby nursed poorly, and on the third day clinical icterus was noted. On October 25, 1960 the bilirubin was 22.5 mg. The next day the baby was transferred to Providence Hospital. The total bilirubin on admission was 30.4 mg. (indirect 29.3 mg. and direct 1.1 mg.). The infant's blood type was B, Rh positive. Continuous intravenous infusion with Levugen and electrolyte no. 48 was started on admission. On October 27, 1960 the total bilirubin was 23 mg. (indirect 22.5 mg. and direct 0.5 mg.). On October 29, 1960, with continuous intravenous fluids, the total bilirubin was 14.5 mg. (indirect 13.5 mg. and direct 1.0 mg.). The baby was discharged the next day.

Case 3. B. E. was a white male infant delivered by cesarean section from a diabetic mother on June 13, 1960. The mother is type A, Rh positive, gravida VI, Para VI. The birth weight was 7 lb., 4 oz. Within 24 hours of life the infant developed the picture of a hyaline membrane syndrome. An X-ray film of the chest was consistent with this diagnosis. Clinical jaundice was noted shortly after 48 hours of life. On June 17, 1960 the total bilirubin was 24 mg. (indirect 22 mg. and direct 2 mg.). The baby's blood type was O, Rh positive. Intravenous Levugen with electrolyte no. 48 was started. On June 18, 1960 the total bilirubin was 14.0 mg. with a direct of 12.5 mg. On June 20, 1960 the total bilirubin was 10.0 mg. (indirect 6.0 mg. and direct 4.0 mg.). The fluids were discontinued, and the baby was discharged on June 24, 1960.

Case 4. R. C. was a white male infant born on December 19, 1960, in another institution. The mother was a gravida III, Para III, type A, Rh negative. The previous babies were normal. The Coombs' test was positive at birth, and because of severe jaundice 2 exchange transfusions were performed. In spite of these procedures the total bilirubin on December 25, 1960 was reported as over 36.0 mg. per cent. The baby was transferred to Providence Hospital on the same day. On admission the hemoglobin was 9.4 Gm. with a total bilirubin of 74 mg. (direct 46 mg. and indirect 28 mg. per cent). Intravenous Levugen with electrolyte no. 48 was started. Within 12 hours the indirect bilirubin dropped to 14.0 mg. per cent and remained below that level throughout the hospital stay. The total and direct bilirubin gradually dropped from 68.0 mg. and 54 mg. respectively on December 26, 1960 to 18.4 mg. and 10.8 mg. respectively on January 4, 1961. The baby was discharged on January 20, 1961, with relatively normal values.

DISCUSSION

Excessive water loss requires replacement regardless of the age or maturity of the newborn infant, and the use of intravenous fluid therapy is the method of choice in the correction of negative fluid balance. The amount of fluid required to fulfill the daily obligatory expenditure of water in normal, full-term infants is almost negligible in the first 2 or 3 days of life. However, the obligatory expenditure of fluids in premature infants or in full-term infants who have an associated disease process is higher than in normal infants.

One of the first observable findings of dehydration in infancy is hemoconcentration. Deprivation of fluid or excessive loss is rapidly reflected in plasma-volume reduction, and the degree of hemoconcentration must be evaluated for proper interpretation of any chemical determination performed on blood or serum. This is very significant in the study of neonatal hyperbilirubinemia due to our dependence on the quantitative bilirubin determination as the most important indication for exchange transfusion.

An analysis of cases no. 2 and no. 3 reveals that both babies were not affected by hemolytic disease. They both have complicating factors which resulted in reduction of fluid intake during the immediate neonatal period. Jaundice appeared in both, and the indirect bilirubin reached levels above 20.0 mg. per cent. The response to intravenous fluid replacement was quite dramatic in both cases.

Case no. 1 was a baby suffering with moderate hemolytic disease due to Rh_0 incompatibility, manifested primarily by hyperbilirubinemia of 24 mg. per cent on the third day of life. Although exchange transfusion was considered at this point, the severe respiratory difficulty contraindicated this procedure. The response to intravenous fluid administration was quite gratifying.

Case no. 4 is a very instructive case which illustrates the apparent development of a bile-inspissation syndrome, superimposed on congenital hemolytic disease of the newborn due to Rh_0 incompatibility. On admission the bilirubin levels revealed a definite obstructive component, but the indirect bilirubin was in the toxic range and repeat exchange transfusion was considered. The decision to try intravenous fluid therapy was made, and it is rewarding to note that within 12 hours the indirect bilirubin dropped to 14.0 mg. per cent and remained at noncritical levels throughout the hospital stay.

To arrive at a final evaluation of the place of intravenous fluid in the treatment of neonatal hyperbilirubinemia the study of many cases is required. We are at the present time evaluating a large series and plan to report our results in the near future. After preliminary studies we have arrived at the following conclusions.

The proper interpretation of high bilirubin values in the neonate requires the simultaneous evaluation of the degree of hemoconcentration. This is best accomplished by the determination of the hemoglobin and the hematocrit. A hyperbilirubinemia appearing after the second or third day of life and accompanied by a simultaneous elevation of the hemoglobin and hematocrit values in an infant without hemolytic disease is treated with intravenous fluids. These babies are carefully followed and the degree of hydration evaluated with repeated bilirubin determinations. Oral feedings are not withheld on anticipation of exchange transfusion but are coincidentally offered if the baby is in condition to accept them. In the absence of excessive red blood cell destruction the correction of the dehydration produces a rapid and remarkable reduction in the bilirubin values. This clinical response, in our experience, has repeatedly demonstrated that serum bilirubin levels above 20 mg. per cent in the presence of hemoconcentration cannot be correlated with the concentration of total body bilirubin.

The careful and controlled use of intravenous infusions as an adjunct to the treatment of severe hemolytic disease of the newborn or hyperbilirubinemia due to other causes has resulted in a reduction in the number of infants requiring exchange transfusions and in the number of repeat exchange transfusions. After 2 efficient exchange transfusions in a case of hemolytic disease of the newborn the sensitized red blood cells have been almost completely removed from the circulation and the problem of reducing tissue bilirubin levels is most important. Proper hydration in these severely jaundiced infants apparently does not hamper but may stimulate the enzymatic hepatic mechanism for bilirubin conjugation. With the exception of case no. 4 we have not seen the development of inspissated bile syndrome in erythroblastotic babies who have been treated with intravenous fluids after 1 or more exchange transfusions.

A word about the choice of fluid is in order. We have utilized almost exclusively Levugen with electrolyte no. 48. This preparation contains fructose 5 per cent with Na^+—25 mEq/l., K—20 mEq/l., Mg—3 mEq/l., Cl—22 mEq/l., lactate 23 mEq/l., and HPO_4—3 mEq/l., which has proven quite effective. The subcutaneous administration of fluids has, in our experience, been of little value in reducing serum bilirubin concentration. This is in sharp contrast with the rapid and excellent results obtained with the use of intravenous fluids.

Close teamwork between the pediatrician and the clinical pathologist in the management of these problems is of primary importance. One cannot overemphasize that clinical evaluation must parallel the interpretation of laboratory tests. There is no rule of thumb to follow in determining the rate and the total volume of infusion to be given in any specific case. One must be guided by the etiologic factors present, the clinical response, and the evaluation of the chemical parameters in deciding the rate of infusion and the total volume given. In general, we have given to premature infants 300 to 400 c.c. of homolyte solution daily and to full-term infants 400 to 600 c.c. daily. These values are modified, according to the amount of oral intake of the infant and the clinical and laboratory findings at a specific time. With this régime we have encountered no cases of kernicterus or of the inspissated bile syndrome during the past few years.

SUMMARY

A preliminary report on our experience with intravenous fluid therapy in the treatment of neonatal hyperbilirubinemia has been presented. Four representative cases have been summarized to illustrate the response to this therapeutic modality used singly or as an adjunct to exchange transfusions. Some basic physiologic principles have been discussed to support the rationale of this treatment. The need of close teamwork between pediatrician and clinical pathologist in the approach to the problem has been emphasized.

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The Physiologic Basis of Serum Protein Studies in Liver Function*

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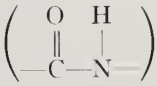
1. PROTEINS—GENERAL FEATURES

Proteins consist of long chains of amino acids joined together by a peptide linkage  $\left(-\overset{\overset{\displaystyle O}{\|}}{C}-\overset{\overset{\displaystyle H}{|}}{N}- \right)$ and with a very special construction, having a specific number and sequence of these side groups, which provide the particular size and chemical identity; and, in addition, the molecule is folded or shaped in a unique configuration which is maintained as long as the protein is biologically active. The amino-acid units may be pure amino acids or may have attached nonprotein groups (prosthetic groups). At the present time human body proteins are considered to be synthesized in various combinations from a total possible number of 22 amino acids.

All body proteins are constantly being degraded to the constituent amino acids and being resynthesized. The rate of turnover differs for the various proteins, and every individual is in a "dynamic state" relative to the balance between anabolism and catabolism of proteins. Each tissue cell synthesizes its characteristic proteins, which in most instances remain within the cells, exceptions being enzymes, hormones, antibodies, etc. The liver differs from the other body tissues in that about half the protein synthesized is liver-cell proteins and the remaining half becomes plasma proteins. The liver, therefore, becomes the single most important organ as the manufacturer of plasma proteins, being responsible for all the albumin fraction, a major portion of alpha and beta globulins, and some portion of gamma globulins. A major portion of gamma globulin is synthesized by plasma cells. The actual tissue source of many proteins in alpha, beta, and gamma fractions is not known.

The serum represents a central point to make quantitative protein measurement valid in the process of anabolism and catabolism of proteins, hence their importance to the physician. Also, it is known that the body will sacrifice tissue protein to preserve serum proteins during periods of protein loss or deprivation. A decrease in serum proteins of 1 Gm. represents a concomitant loss of about 30 Gm. of tissue protein. By simple calculation, one appreciates that a decrease of 1 Gm. of protein per 100 ml. represents a tissue deficit of 800 to 1,000 or more grams for the average adult.

2. SERUM PROTEIN FRACTIONS

Historically, the serum proteins were divided into 2 major fractions as follows:

A. Albumins—Soluble in water and precipitated from solution by saturation with salts such as ammonium sulfate, sodium sulfate, etc.

B. Globulins—Insoluble in water but soluble in dilute salt solutions; precipitated from solution with about half saturation with such salts as NH_4SO_4 and $NaSO_4$.

These classic properties of albumin and globulin are not completely valid today because of the greater knowledge of proteins. Even the use of other large fractions must ultimately yield to individual proteins as our knowledge and technical skill improve.

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* Presented, October 26, 1960, as a part of the Postgraduate Lectures on the Basic Sciences, sponsored by the Medical Society of the District of Columbia.

The globulin fraction is commonly subdivided into alpha, beta and gamma fractions. The basis for this subdivision most frequently used is the migration of the protein by electrophoresis, which is a function of the surface charge carried on the molecule. Our situation at the present is that measurements of albumin and alpha, beta, and gamma globulins vary, dependent on the method employed. The quantitation of total protein by various methods yields good agreement, but with each method quantitation of the major fractions may be different and the composition of the protein molecules making up that fraction may vary. Therefore, it is essential that, for the method of fractionation adopted, rigid controls of the procedure be followed and that normal values for that method be established.

Each of the major fractions consists of a mixture of separate types of protein molecules which, due to physical and chemical properties, are grouped together. The functions of individual proteins may range from being closely related to quite diverse. The ratio of the quantity of each type of protein within a fraction may not be constant. Therefore, the quantitation of a protein fraction may parallel the functions of the fraction, but this is not necessarily a valid deduction. The value of determinations of individual subfractions is increasing and in the future will likely become the important protein studies.

3. PROTEIN FRACTIONS, SUBFRACTIONS AND FUNCTIONS

(This material constitutes a listing of some items known and well established, but there is a great deal that is not known about each item.)

A. The Albumin Fraction

This is believed to be synthesized only by the liver. The molecular weight averages 69,000. The half life is 10 to 17 days. The normal range is 3.4 to 4.5 Gm. per cent with a median of 3.8 Gm.

Albumin is responsible for 75 to 80 per cent of plasma total osmotic pressure, and this is important in plasma volume and tissue fluid pressure. One Gm. of albumin increases plasma volume 18 ml. Albumin exerts 4 times the osmotic pressure of an equal amount of globulin. Albumin represents the major mobile reserve of amino acids and thus has a major role in tissue nutrition. It also acts as a buffer and a transport vehicle for ions. The capacity for anions is great and to a lesser extent for cations, divalent and trivalent, than monovalent anions. The albumins serve as a carrier system for a number of substances such as bilirubin, sulfonamides, phenolsulfonphthalein, penicillin, progesterone, etc.

Increased Values

1. Dehydration with hemoconcentration.

Decreased Values

1. Liver disease with impaired synthesis: hepatitis, cirrhosis, obstructive jaundice.
2. Malnutrition
3. Loss—kidney, bowel, tissues
4. Analbuminemia
5. Pregnancy—decrease progressively to term and return to normal in 8 weeks.

B. Alpha Globulin Fraction

This is believed to be largely synthesized by the liver. The molecular weight is 41,000 to 820,000 and the half life 10 to 15 days. The normal range is 0.8 to 1.3 Gm. per cent, with the median of 1.0 Gm.

Glycoproteins and mucoproteins make up a major portion of this fraction. In the alpha-1 fraction the following have been identified: orosomucoid, an inhibitor of viral hemagglutination, a hyaluronidase inhibitor, a trypsin inhibitor, a lipoprotein, and a thyroid hormone-binding protein. In the alpha-2 fraction the following are found: ceruloplasmin-copper transport, haptoglobin, transferrin-iron transport, a small quantity of iodoprotein, prothrombin, cholinesterase, complement, alkaline phosphatase.

Abnormal proteins occurring in the alpha fraction include the protein in Waldenström macroglobulinemia and myeloma protein in some cases of multiple myeloma.

Increased Values

1. With decrease in albumin unless liver disease is present
2. Obstructive jaundice
3. Trauma, burns, etc.
4. Nephrosis
5. Diabetes mellitus
6. Collagen vascular diseases
7. Occasional hyperthyroidism
8. Malignancies and leukemia
9. Occasional case of myeloma.

Decreased Values

1. Acute liver disease
2. Cirrhosis
3. Occasional hypothyroidism.

C. Beta Globulin Fraction

This is believed to be largely synthesized by the liver. The molecular weight is 88,000 to 1,000,000. The half life is 10 to 15 days. Normal values are 0.8 to 1.1 Gm. per cent, with a median of 0.9 Gm.

Lipoproteins make up a major portion of beta globulin, which transports about 80 per cent of plasma lipids. Other subportions include glycoproteins, transferrin, antihemophilic globulin, plasma thromboplastic factor, some antibodies, and a carrier system for thyroid-stimulating hormone.

Abnormal proteins that may be present include C-reactive protein, myeloma protein in some cases of multiple myeloma and the protein in some cases of Waldenström macroglobulinemia.

Increased Values

1. Cirrhoses, portal, post-necrotic, biliary
2. Xanthomatosis
3. Frequently associated with rise in gamma fraction
4. Hyperlipemia state
5. Hypothyroidism
6. Diabetes mellitus
7. Collagen vascular disease
8. Some cases of multiple myeloma
9. Pregnancy—may rise to 2 times normal value.

Decreased Values

1. Rarely seen
2. Cholestases
3. Occasionally in anemias
4. Eclampsia—reduced from elevated normal value in pregnancy but not below nonpregnant patients' normal.

D. Gamma Globulin Fraction

This may be partly synthesized by the liver, the major portion being attributed to plasma cells; the molecular weight is 150,000 to 1,000,000; the half life is 15 to 20 days or 60 days; the normal value is 1.0 to 1.6 Gm. per cent, with a median of 1.4 Gm. per cent.

The gamma globulins are commonly considered as synonymous with antibodies. It is a mistake to think that all antibodies are gamma globulin or that all of the gamma globulins are antibodies. These proteins are considered important in the synthesis of nucleoprotein. A small fragment of gamma consists of a macroglobulin (carrier system for amylase, vitamin B_{12}, etc.).

The abnormal proteins found include rheumatoid factor, myeloma protein in some cases of multiple myeloma, and macroglobulin in some cases of Waldenström macroglobulinemia.

Increased Values

1. Cirrhoses: related to plasma-cell infiltration
2. Most infectious diseases: granulomatous processes
3. Myeloma frequently
4. Collagen vascular diseases
5. Acute and chronic nephritis
6. Neoplasma and leukemias.

Decreased Values

1. Hypogammaglobulinemia, acquired
2. Hypogammaglobulinemia, congenital
3. Primary nephrosis
4. Familial amaurotic idiocy
5. Lymphomas, occasionally
6. Dystrophic myotonia
7. Pregnancy (frequently reduced).

Discussion

The total serum proteins and major subfractions studies provide significant information in the diagnosis of liver disease and in following the course of liver disease. All of the serum albumin and most of the alpha globulins are made by the liver, hence these 2 fractions are the most informative of liver functional status. In the properly hydrated patient, the serum albumin level can be considered to reflect hepatic-cell function, and it is usually easy to clinically exclude the exceptions: (1) albumin loss by kidney, bowel, or into the tissues and (2) long-standing malnutrition. In liver disease there is a decrease in albumin and alpha globulin fraction. In other conditions in which albumin is decreased there is usually an increase in alpha globulins (table 1). The gamma globulin fraction is a reflection of the number of plasma cells in the liver or elsewhere and becomes elevated during the course of hepatitis and is frequently found in cirrhosis. The beta globulin fraction

TABLE 1

Typical Protein Patterns

(Deviations Are Taken from Median Value)

Clinical State	Total Protein	Albumin 53 % +	Alpha Globulin 14 %	Beta Globulin 12 %	Gamma Globulin 20 %
Hepatitis	Usually normal	Decreased	Slight decrease	Slight decrease	Increase — rises during convalescence
Cirrhosis	Decreased	Decreased	Frequently decreased	Slight increase	Increase usually and further increase and drop with activity of the disease
Obstructive jaundice (early)	Normal	Normal	Normal	Normal	Normal
Infections and inflammations (normal liver)	Usually normal	Usually normal	Increased	Bacterial infection, marked increase. Viral infection, slight increase	Increased
Acute and chronic nephritis	Usually normal	Slight decrease	Slight increase	Normal	Slight to moderate increase
Nephrosis	Decreased	Greatly decreased	Great increase	Normal to slight decrease	Usually slight to moderate decrease
Collagen vascular diseases	Usually normal	Decreased	Increased	Normal to slight increase or slight decrease	Increased
Malignant diseases and leukemias	Normal	Decreased	Slight increase	Usually normal or slight increase	Slight increase
Myeloma	Usually increased	Usually increased	Myeloma protein may be present in any of the globulin fractions; it may be as high as 80 per cent of total protein.		

usually follows, to a lesser degree, the changes in gamma globulin except for high values in biliary cirrhosis and hyperlipemic states.

The medical profession has employed numerous flocculation and turbidity procedures in the diagnosis and evaluation of hepatic diseases. The many procedures making up this group of analyses are empirical. While claims of specificity for hepatic disease are made for some of these studies, an objective analysis fails to reveal any basis for such specificity. Basically, this group measures the ratio of the albumin and globulin fractions in the serum. Each of these determinations employs a liquid system which when made unstable results in the production of a flocculation or turbidity. The albumin protein fraction exerts a stabilizing effect and the globulin fractions have an unstabilizing action. Whenever the normal relative proportion of the protein fractions is maintained, these procedures yield normal values whether the total protein be elevated, normal, or reduced. Although a relative increase in albumin makes the system more stable, a relative decrease in albumin makes the system less stable. In a reverse manner, a relative increase in globulins is unstabilizing and a relative decrease in globulin would be stabilizing. The many procedures differ in their sensitivity to a relative reduction of albumin and to a relative increase in total globulin or to one of the globulin fractions. Any clinical state or disease associated with suitable alterations in the ratios of protein fractions will produce abnormal results in this group of studies.

The current practice of determination of total protein and fractionation of proteins should make flocculation and turbidity procedures obsolete. Good protein studies yield better and more specific information. One can use the data of protein studies to predict normal or abnormal flocculation and turbidity procedures.

Intestinal Obstruction in Pregnancy

Report of Two Cases

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THE SUCCESSFUL TREATMENT of 2 patients with intestinal obstruction occurring during pregnancy in the same year at Providence Hospital prompted the presentation of these cases and a short review of the subject covering a 6-year period (1955–60).

Intestinal obstruction during pregnancy is uncommon, the incidence being about 1 per 6,000 to 10,000 deliveries or less. A review of the hospital records for the past 6 years failed to reveal any other patients with this combination. Our incidence then dropped to 2 in 21,134, or approximately 1 per 10,000.

This emergency seems to occur more frequently at 3 separate times during pregnancy: about the middle of gestation, at term, and in the immediate postpartum period. Frequently patients give a history of previous abdominal surgery, and for that reason adhesions and bands, with or without volvulus, is the most common cause of obstruction. Less frequent causes are volvulus, without antecedent surgery, hernias, and intussusception.

The ileum, because of its closer approximation to the pelvic organs and the right iliac fossa, appears to be the most common section of bowel involved when adhesions or bands are at fault. Malkasian et al,[1] in a review of volvulus, reported the large bowel, especially the cecum and sigmoid, involved in the majority of cases.

The alertness of the physician to the possible occurrence of obstruction during pregnancy, especially in a patient with a history of abdominal surgery, is the first step in the diagnosis. Unfortunately, many of the symptoms of early obstruction occur during the course of a normal pregnancy. Nausea and vomiting, not only limited to the first trimester, flatulence, cramps and constipation, and emotional disturbances make exact evaluation of this condition somewhat difficult in the early hours of the disease.

Abdominal distention and tenderness as early signs seem equivocal, this perhaps depending more on the stage of the pregnancy. As gestation progresses, the more distended the abdominal wall becomes and obscures early intestinal gas retention. Dehydration may occur rapidly in the wake of persistent vomiting. Flat plate X-ray films of the abdomen revealing distended bowel and fluid levels are diagnostic. If the diagnosis is delayed or treatment sought too late, the bowel may become strangulated and gangrenous, with marked deterioration of the patient. If corrective operative treatment is not instituted, increased abdominal distention, increased pulse rate, marked dehydration, shock, bowel-wall perforation, and peritonitis follow.

There is a place for both medical and surgical measures in handling a patient who is pregnant and develops intestinal obstruction. Gastrointestinal suction, adequate fluid replacement, sedation and antiemetics, and occasionally an enema should be used in early cases in which obstruction is questionable or partial. If the obstruction is partial or based on some temporary kinking of the bowel, the medical management may be entirely satisfactory. However, if the symptoms return, grow worse, or new signs appear despite treatment, abdominal laparotomy should be done. The extent of the operative procedure depends on the cause of the blockage and the severity of the vascular involvement. The enlistment of a surgical consultant, at this time, if not previously obtained, to share the responsibility of the operative procedure would seem to be in the best interest of both the patient and the obstetrician.

In the earlier stages of pregnancy the uterus usually offers no difficulty at operation, but at term cesarean section may have to be done before adequate exposure revealing the true diagnosis and treatment can be accomplished.

REPORT OF CASES

Case 1. A 33-year-old gravida I, Para O, whose last menstrual period occurred on January 7, 1960, was admitted to Providence Hospital on June 16, 1960 in her twenty-second week of pregnancy because of colicky upper abdominal pain, nausea, and vomiting of 7 hours' duration. In 1958 there had been a dilation and curettage for menorrhagia. In 1959 extensive multiple myomectomy, Baldy-Webster uterine suspension, and appendectomy were done. The patient had been well until early morning the day of admission, when she began to have nausea and vomiting and what she thought was severe indigestion. Paregoric was taken but did not give relief. Intermittent colicky upper abdominal pain, gradually increasing in severity, associated with only slight abdominal distention, became evident. Because of these symptoms and a history of abdominal surgery, the patient was admitted to the hospital for observation and treatment of possible intestinal obstruction.

Surgical consultation was obtained at noon on the day of admission, at which time the vomiting had stopped and the cramps were diminishing. Bowel sounds were considered normal, and only slight abdominal distention was present. Treatment consisted of sedation and intravenous fluids. The white blood cells numbered 19,000, with 90 per cent segmented forms, 5 per cent band forms, and 5 per cent lymphocytes. The urine contained 4 plus acetone.

Abdominal cramps gradually returned over the next several hours, becoming severe and associated with a return of vomiting. Peristalsis became more active, and "rushes and tinkles" were audible. A flat X-ray plate of the abdomen revealed dilated loops of bowel in the mid-abdomen which showed fluid levels in the upright position. A small fetal skeleton was also visible. Abdominal laparotomy was considered essential to relieve small bowel obstruction. This was done at 10 p.m., about 13 hours after admission. A Levin tube with suction was in place prior to surgery.

At operation a beginning volvulus was found with discoloration of the terminal several feet of the ileum, which was densely adherent by several bands to the dome and upper posterior surface of the uterus. The adhesions were severed, and the freed bowel regained its normal color shortly. Further exploration revealed several other loops of bowel adherent to the myomectomy scars on the posterior surface of the uterus. These adhesions were also severed. The wall of the pregnant uterus itself was well healed, and there was no evidence of separation of any of the myomectomy scars. Inspection revealed the bowel wall intact, and no areas of impaired bowel circulation were found. The abdominal wall was closed in layers, with the added protection of retention sutures.

The postoperative course was extremely placid, fetal activity and heart tones remained good, no contractions ensued, and the patient remained afebrile. The Levin tube was removed on the fourth postoperative day, and she had a normal bowel movement on the same day. She was discharged on the ninth postoperative day, and retention sutures were removed on an outpatient basis on the fourteenth day. The remainder of the prenatal course was uneventful. An elective low cervical cesarean section was done on October 17, 1960, and a healthy 7 lb., 13 oz. female was delivered. At this time there was a recurrence of several adhesions between the bowel wall and the posterior surface of the uterus, which were severed. The postoperative course was uneventful, and she was discharged on the seventh postoperative day. The general condition has remained good to date.

Case 2. A 24-year-old gravida III, Para I, whose last menstrual period occurred on April 5, 1959, was admitted to Providence Hospital at 6 a.m. on September 13, 1959. She gave a 12-hour history of generalized crampy, abdominal pain, accompanied by nausea and vomiting. A normal bowel movement had occurred on the day prior to admission. In 1955 there had been a term pregnancy, in 1956 a right oöphorectomy and appendectomy, and in 1957 a 3 months' spontaneous abortion. There were multiple allergies, and occasional attacks of asthma had occurred throughout life. About 12 hours prior to hospitalization the patient began having generalized abdominal pain and vomiting. Treatment throughout the night with antiemetics and sedation failed to effect a response. The following morning she was admitted to the hospital for observation and treatment of possible intestinal obstruction.

Surgical consultation on admission revealed a mild, generalized, abdominal tenderness without distention. The bowel sounds were considered normal. The diagnosis was gastroenteritis, but intestinal obstruction could not be excluded. The patient was treated with intravenous fluids, sedation and antiemetics. The white blood cells numbered 15,600. The urine contained 1 plus albumin and 4 plus acetone. An X-ray film of the abdomen revealed slight dilatation of a few loops of small bowel with fluid demonstrated on the erect study. Skeletons of a 5- to 6-month twin pregnancy were also visible.

The patient was highly excitable, and clinical evaluation was difficult at times, but vomiting persisted intermittently although no other clinical signs changed. There was occasional passage of a small amount of flatus. The pregnancy continued unchanged. A barium swallow on September 16 failed to reveal any lesion. Her condition gradually deteriorated over the next several days. The pulse ran consistently over 110, vomiting increased, and weight loss and dehydration occurred despite adequate fluid replacement. Only 1 small bowel movement occurred on September 18. The diagnosis of partial intestinal obstruction was entertained, and laparotomy was undertaken.

Abdominal exploration revealed a loop of small intestine representing about 1 foot of terminal ileum which was passed through an adhesive loop in the ileocecal area at the site of the previous appendectomy. The loop was distended and engorged but not infarcted. The adhesion was divided, and the loop of bowel returned to normal color and vascularity. The abdomen was then closed.

The postoperative course was uneventful and she was discharged on the seventh postoperative day. The twin pregnancy maintained itself in a normal fashion, and healthy but small twins were delivered vaginally on December 28, 1959. The first baby, a male weighing 4 lb., 13 oz. and the second, a girl weighing 4 lb., 4 oz., were delivered after a 12-hour labor under caudal anesthesia. The postpartum course was normal, and the patient has remained well to date.

Comment

Both of these patients fitted into the most common pattern of this syndrome, namely, history of previous surgery, mid-pregnancy, adhesions, and involvement of the terminal ileum. The second patient, when reviewed as a case report, seems typical, and in retrospect the 4-day delay in surgical intervention does not seem justified. However, this young lady was not an easy patient to care for; her emotional lability, chronic complaints, and occasional passage of small amounts of flatus and feces helped to confuse the picture.

A Levin tube with suction as used in the first case is helpful. The review of the literature confirms the opinion of the author that the distance a tube can usually be passed is limited. Usually the tube remains coiled in the stomach or passes no further than the duodenum. Gastric suction alone, however, has its advantages by increasing the patient's comfort by reducing retching and vomiting, preventing gastric distention from regurgitation, and secondarily reducing intestinal distention.

The maternal mortality had been about 30 per cent, but in recent years with earlier diagnosis, improved anesthesia, and pre- and postoperative care, etc., it has decreased. Svesko and Pisani[2] in 1958 reported 6 cases with 1 maternal death, a rate of 16 per cent for the preceding 15 years at their hospital. The risk is dependent on the viability of the bowel involved, and the outlook becomes poorer the longer the duration of the obstruction and the greater the extent of the gangrene.

The great risk to the pregnancy should also be recognized. Malkasian, Welch and Hallenbeck, reporting volvulus alone, had a fetal mortality of 27.9 per cent. Others have reported nearly 60 per cent. The chances of infant survival increase the later during pregnancy the obstruction occurs, with decreasing risk of premature delivery. Earlier diagnosis and treatment would also seem to improve the chances of the continuation of the pregnancy.

The finding in the first patient of a return of adhesions at the time of her cesarean section some 4 months later makes her prognosis for the future guarded. Very careful attention should be given to even the slightest symptoms of obstruction should they occur.

(*Continued on page 504*)

Comparison of Red-cell Uptake of I^{131}-tagged Tri-iodothyronine and Other Thyroid Function Analyses with the Clinical Evaluation of Thyroid Function

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THE AIM OF THIS STUDY is to compare results of several thyroid function procedures with the clinical evaluation of the thyroid functional status. The thyroid studies performed are: T_3 (red-cell uptake of I^{131}-tagged tri-iodothyronine), PBI (protein-bound iodine), I^{131} uptake (radioactive iodine uptake), and BMR (basal metabolic rate). Thirty consecutive patients are selected who have had a T_3 analysis and 1 or more additional thyroid function studies. The results of these studies are then compared as to agreement or disagreement with the clinical impression.

Fundamental Measurement of Procedures

Each of the currently available thyroid function procedures measures a different aspect of thyroid physiology and iodine metabolism. While reasonable agreement exists with these measurements and the clinical evaluation, extrathyroid influences may cause 1 or more accurately performed studies to lose their correlation with the clinical state. The study in this paper is directed toward indicating which procedure varies the least with extrathyroidal influences and correlates the best with the clinical state.

The aspects measured by the particular procedures are:

1. T_3 (normal range 11.8 to 19 per cent for males, 11 to 17 per cent for females) measures the carrier systems of thyroid hormone. This carrier system is composed of the following: (1) a portion of the alpha globulin fraction, (2) albumin, and (3) red blood cells. Thyroxin is transported mainly by the alpha globulin fraction and to a lesser extent by albumin and red blood cells. Tri-iodothyronine is transported by the same carrier system but is more loosely bound to this system than thyroxin. If the thyroxin level is elevated, the capacity of alpha globulin to bind tri-iodothyronine is exceeded and the excess must be carried by albumin and red blood cells. If the level of thyroxin is low, the reverse events are true. Therefore, with elevation of thyroxin the red-cell uptake of tri-iodothyroxine will be increased, and with decreases of circulating thyroxin the red-cell uptake of tri-iodothyronine will be decreased.

2. PBI (normal range 4 to 8 micrograms). This measurement has been shown to be nearly all thyroid hormone and thus measures equilibrium between hormone production and utilization.

3. I^{131} uptake (normal range 15 to 45 per cent) measures ability of thyroid "iodine trapping" mechanism.

4. BMR (normal range +10 to −10 per cent)

measures the amount of body heat produced per unit time in a patient at "basal" conditions.

DISCUSSION

The clinical impressions are assumed to be correct and are used as a basis for comparison of the thyroid function studies (table 1). The T_3 analysis agrees with the clinical impression in 26 out of 30 determinations. Diabetic acidosis (case no. 8) was present in a disagreement, and I believe that dehydration may have concentrated the PBI to give a high result and also the plasma-protein carrier system for T_3, therefore diminishing the uptake of T_3 into the red blood cells.

TABLE 1

Thyroid Function Studies

Patient	Clinical Impression	PBI (Per cent)	T_3 (Per cent)	I^{131} (Per cent)	BMR	Other
1. M. B.	Euthyroid		17.0		+17	
2. R. B.	Euthyroid	6.1	11.8	15.0		95% thyroidectomy 5 years ago
3. J. H.	Hyperthyroid (M*)		23.4	74.0		
4. V. H.	Euthyroid		13.1	60.7		Recently treated with Lugol's solution and thiouracil
5. M. K.	Hypothyroid	5.7	9.0			
6. J. K.	Hyperthyroid (M)	7.0	17.8	46.0	+49 +22 +4	Nodular colloid goiter
7. C. F.	Euthyroid		15.3		+6	
8. J. A.	Euthyroid	9.6	9.3 9.5			Enlarged thyroid, uncontrolled diabetic acidosis
9. S. W.	Euthyroid		12.3	18.0		Partial thyroidectomy
10. K. O.	Hyperthyroid	5.7	21.0			
11. J. P.	Euthyroid (M)	5.7	17.3			Acute thyroiditis
12. D. W.	Hypothyroid (M)	1st 0.0 2nd 4.6	15.5			I.V.P. after first test
13. E. S.	Euthyroid	8.0	12.5			
14. A. D.	Euthyroid	5.7	10.8			
15. W. B.	Euthyroid	10.3	12.1			
16. V. G.	Hyperthyroid	4.0	18.6		+26	Paroxysmal tachycardia
17. G. G.	Euthyroid (M)	8.1	11.2			
18. D. L.	Euthyroid	9.5	14.7	11.0		Diabetes, nodular goiter, I.V.P.; cholangiogram
19. L. N.	Euthyroid		13.6	41.0		I.V.P.
20. M. I.	Hyperthyroid	10.1	23.7			
21. F. N.	Hyperthyroid	8.6	9.9	9.0		Tests taken after I^{131} therapy
22. H. Z.	Euthyroid	1.2	10.9			
23. J. L.	Euthyroid		13.1	68.0		Diabetes
24. M. B.	Hypothyroid	2.7	8.9			Partial thyroidectomy
25. J. B.	Hypothyroid		9.2		+16	Partial thyroidectomy
26. C. S.	Euthyroid	7.3	9.3			Diabetic
27. J. W.	Euthyroid	5.0	11.9			
28. M. H.	Euthyroid	8.5	14.5			
29. H. L.	Euthyroid		14.5		+23	Controlled hyperthyroid with previous subtotal thyroidectomy
30. E. P.	No comment, considered hypothyroid	Over 100 (contaminated)	8.2			Old infarction, cholesterol 380 mg. %, sinus bradycardia of 57

* Male.

The T_3 analysis agreed with the clinical impression in greater numbers than the PBI. In 8 cases (nos. 5, 10, 15, 16, 18, 22, 28 and 30), in which disagreement of PBI and clinical impression occurred, the T_3 analysis agreed clinically, whereas in 2 other cases (nos. 12 and 26) the PBI agreed clinically and the T_3 analysis did not. Two disagreements (case no. 18 and no. 30) of the PBI and clinical impression can be explained by iodine contamination. Another disagreement (case no. 8) occurred in diabetic acidosis as explained above. No doubt, in instances the T_3 analysis was selected after the PBI did not agree with the clinical impression, and therefore the clinical correlation of the PBI would be expected to be higher in more routine circumstances.

The I^{131} uptake agreed with the clinical impression in 6 cases (nos. 2, 3, 6, 9, 19 and 21) out of 9. Iodine administration was a most important factor in disagreement with the clinical impression, since in 2 cases (nos. 4 and 18) out of 3 (nos. 4, 18 and 23) disagreements involved evidence of iodine intake. The T_3 analysis agreed clinically in all the disagreements of the I^{131} uptake.

In 3 cases (nos. 6, 7 and 16) out of 5 the BMR could be considered agreeable clinically.

CONCLUSIONS

Advantages of the T_3 analysis are: (1) validity in event of organic iodide contamination, (2) high degree of correlation with the clinical impression, (3) better correlation with the clinical impression than the PBI, I^{131} uptake, and the BMR, and (4) no radioactive material given the patient. Since the T_3 study varies the least with extrathyroidal influences and correlates the best with the clinical impression, it is concluded that the T_3 study should be the routine procedure of choice for thyroid function, with the PBI and I^{131} uptake used in a supplementary role.

Pruritus Vulvae

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In spite of our generally improved medical and surgical care, our new antibiotics, the anti-inflammatory drugs, and our very effective tranquilizers, pruritus vulvae condition is common and, I believe, is on the increase.

This symptom should not be considered a disease *sui generis*, since all too often it is merely a symptom of some underlying, more fundamental disease.[1, 2] Hence, one should not be satisfied to accept the diagnosis of pruritus vulvae as definitive until adequate diagnostic measures have been taken to determine whether an underlying disease exists.

Since itching of the vulva is commonly associated with anal itching, obviously the management of pruritus vulvae will often necessitate diagnostic and therapeutic measures of anal and rectal disease.

In general, the causes of pruritus vulvae may be classified as follows:

- Local Factors
  - Medical
    - Contactants
    - Infections
    - Infestations
    - Specific skin diseases
  - Surgical
    - Neoplasms of the skin and mucous membranes
    - Gynecologic disorders
    - Anorectal disease
- Systemic Factors
  - Internal diseases
  - Psychogenic disease

More specifically, these causes may be listed under the following 20 headings[3]:

1. Moniliasis—intertrigo
2. Contact dermatitis
3. Neurodermatitis
4. Psychogenic pruritus
5. Internal disease
   a. Diabetes
   b. Jaundice
   c. Lymphoblastomata
6. Tinea cruris
7. Parasitosis
   a. Trichomonas
   b. Pediculosis
   c. Pinworms
8. Lichen planus
9. Psoriasis
10. Senile atrophy (menopause)
11. Leukoplakia
12. Lichen sclerosus et atrophicus
13. Kraurosis vulvae
14. Pregnancy
15. Incontinence of urine
16. Cystitis, pyelitis, nephritis
17. Hemorrhoids, anal fissures, and fistula
18. Gonorrhea
19. Herpes simplex
20. Less common causes: drug addiction, trichiasis, Fox-Fordyce disease, varicocele of vulva, gout, tuberculosis, dermatitis herpetiformis, and inadequate hygiene.

It is of paramount importance to obtain a careful history, and the physician who first sees the patient has the best advantage. The earlier one can make an etiologic diagnosis, the less the likelihood that the process will become chronic. When chronicity and long-standing dermatitis appear, not only is history-taking difficult but it is often of little or no value. The patient often has forgotten the conditions that were associated with the onset of the disease, and other factors enter to complicate and draw attention from the original cause or causes.

It is important to know (1) the duration of the symptom, (2) the time of onset, if possible, (3) the time of appearance and reappearance, if the process is intermittent, (4) what aggravates or mitigates the pruritus, (5) what contactants touched the area,[4] including clothes, soaps, cosmetics, douche powders, contraceptives, medicaments, and toilet tissue, and (6) what drugs the patient has taken.

Although the physical examination may require only inspection of the vulva, it should not be limited to this unless an obvious and sufficient cause has been found from the history and inspection. When no cause is evident, a general physical examination is in order, as well as a complete vaginal and rectal examination, including anoscopic visualization.

Early in the course of management, if a satisfactory cause is not found and before extensive (and often expensive) therapy is undertaken, one should look for psychogenic factors. These may be either causative per se or merely aggravating factors. Discrete inquiries into a patient's marital adjustment and sexual habits can be made without upsetting the patient. These may be coupled with inquiries into the patient's nonsexual adjustments, e.g., home life, friends, relatives, how the patient occupies herself, and, particularly, her general degree of emotional stability.

Specifically, in the history of sexual adjustment, one should determine if dyspareunia exists, whether orgasm occurs, whether masturbation is practiced, and if there are any feelings of guilt. Also, one should determine if the symptom of pruritus is wanted because of the sensual gratification obtained by scratching the area.

Laboratory examinations are often helpful and include (1) cultures for Monilia, fungi and bacteria, (2) smears for Trichomonas and gonococci, (3) urinalysis, (4) stool examinations for parasites, and (5) a biopsy when indicated.

Although the correlation of all these diagnostic facets may fall within the scope and ability of a single practitioner, it is obvious that consultation will often be necessary for a definitive diagnosis. Consultation with the gynecologist, internist, or psychiatrist should be had in good time.

It is evident that the most effective treatment will be that directed toward the cause, if and when it can be found. This may entail a combined plan of therapy,[5] including the help of the family doctor, the dermatologist, the gynecologist, the proctologist, and the psychiatrist. Such combined therapy should be carefully planned and carried out early, since too much emphasis cannot be placed upon the avoidance of chronicity.

In addition to specific treatment for the underlying disease, or when no such process can be found, local dermatologic therapy will be required. The basic therapeutic concept is to treat the inflammation of the skin by wet dressing (colloidal soaks) followed by soothing applications of creams or possibly lotions. I say "possibly" lotions because lotions tend to dry the skin and may cause cracking. Some women cannot tolerate lotions on the vulva; however, where there is a lot of inflammation and oozing, a creamy lotion may be well tolerated.

I have found the following plan of therapy useful:

1. Burow's solution (1:40) to which is added about 10 Gm. of soluble starch. This is commercially available as Bur-Veen or Soy-Boro. One package is added to a quart of water.

2. The use of this is followed with the use of a lotion:

℞	Starch	15.
	Zinc oxide	25.
	Vanishing cream base	15.
	Rosewater q.s.ad	90.

To this may be added 0.5 to 1 c.c. of phenol.

3. If the lotion is not well tolerated, an antipruritic cream may be employed.

℞	Menthol	0.15
	Phenol	0.30
	Vanishing cream base q.s.ad.	60.

4. Creams containing hydrocortisone or its derivatives are often of great value. However, they should not be used over extended periods of time without medical supervision. It is probably wise to use a local antibiotic with the steroid. A hydrocortisone-neomycin cream may be used as it comes or it may be diluted with 1 to 2 times its weight of vanishing cream.

℞	Neodiloderm Cream	15.
	Dermabase q.s.ad.	60.

5. If moniliasis is present, I use

℞	Nystatin Cream	15.
	Vanishing cream base q.s.ad.	60.

In addition, I often prescribe nystatin suppositories twice daily, combined with vinegar douches.

6. In chronic cases where there is lichenification and thickening, tar preparations, especially those with hydrocortisone, are helpful. Examples of these are Tarcorten and Hyburquin. These may be used as they come or they may also be diluted with equal amounts of a vanishing cream.

7. Estrogen creams,[6] such as Premarin Vaginal Cream, may be quite helpful in selected cases. However, estrogens should not be used over large areas or for long-term therapy.

8. As a last resort and when all other measures have failed, I have used with some success:

℞	Liquor plumbi subacetatis	4.
	Tinctura opii	4.
	Liquor calcis q.s.ad.	90.

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PRESIDENT'S PAGE

DOCTORS AND PATIENTS

The good care of patients is the highest purpose of our profession. It overrides even our obligation to teach, which is the perpetuating mechanism by which we provide for the future of good medicine. Under the much vaunted and properly revered doctor-patient relationship the best care of the patient requires that the doctor and patient care for each other. The family doctor is the personal physician to the individual members of the family. He is accustomed to respond to their needs at any time. He is always a friend in need.

These are the traditions to which we adhere and they determine in significant degree the conditions under which we work. However, there are important circumstances which are limiting in increasing degree our ability to approach the ideal set for us.

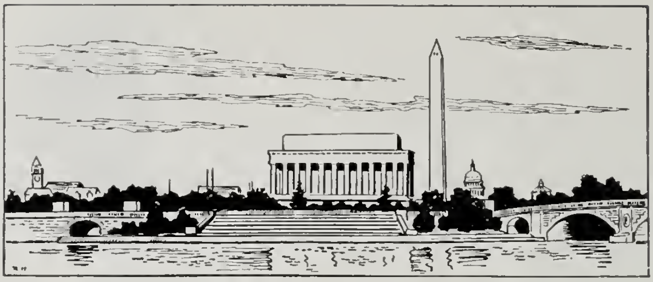
Metropolitan Washington not only is growing rapidly but its people are constantly shifting about, from the nature of our Nation's Capital. Specialization in medicine also is shifting our professional activity into new patterns of patient care.

And so it comes about that certain services of physicians are less readily available than formerly. Home calls are not as easily arranged. It is even charged on occasion that some physicians will not see their own patients in home emergencies. Even if these complaints are isolated and not typical of usual conduct, the Society is deeply concerned.

We are calling the problem to the attention of our members and requesting committees and sections to assist in finding solutions. We are enlisting the aid of public news media in arousing general concern for the public's share in responsibility. Especially do we suggest that families make personal choices of physicians before the needs of emergency care. Both patient and doctor should have an understanding of what each will do for the other. Efforts in these directions will have widespread benefits.

For our Society members the active cultivation of such doctor-patient relationships will enhance the public image of the good doctor. It will not be undermined by the political vicissitudes of a world in revolution. It will be our best insurance for a good future.

Donald Stubbs



EDITORIALS

THE TRANSITION: MEDICAL ART TO MEDICAL SCIENCE

As we think back to the day of June 10, 1861, when Providence Hospital opened, it is difficult to comprehend the physician's lot with his problems, tribulations, frustrations and limited medical knowledge. The practice of medicine was the practice of an art. The new knowledge of anesthesiology coupled with the war casualties was soon to result in significant developments in surgery. Anatomical pathology was largely unknown and not applied. Clinical pathology was unborn: the currently important bacterium, *Staphylococcus aureus*, was isolated and identified in 1884. Radiology was unknown and must await Roentgen's discovery in 1896. Most unfortunate was the fact that specific therapeutic agents were practically nonexistent. Despite all the obstacles faced by these dedicated and devoted physicians, they earned and left as a heritage the present high esteem of the public for the medical profession.

In the modern era, dating from World War I, the medical profession has benefited from an explosion of scientific knowledge accompanied by an equal advance in technology. The many developments include such significant advances as the following: the electrocardiogram; the electroencephalogram; the spectrophotometer; the field of radioisotopes; the disciplines of clinical pathology including biochemistry, blood banking, hematology, microbiology, immunology and virology. The advent of antibiotic therapy, the development of enzymology, the knowledge of endocrine glands and hormones, the genetic factor in disease states and molecular alteration, and the development of vascular and heart surgery are benefits denied the first physicians of Providence Hospital. The modern community hospital with its facilities, instruments and equipment has become an educational institution for its medical staff. Modern medicine requires that its practitioners be scientists, and because of the rapid expansion in knowledge, the physician must pursue an aggressive, continuing educational program throughout his professional career.

In this issue of the MEDICAL ANNALS, the scientific papers written by members of the Providence Hospital Medical Staff indicate some of the scientific and technologic advances in the diagnosis and treatment of diseases. We hope that we may be pardoned for the pride we take in our Medical Staff and its continued devotion to research and the implementing of programs of education which result not only in improved patient care but also in better community health.

SISTER ELEANOR
Administrator, Providence Hospital

Opinion expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia

LET US NOT "BEAR THOSE ILLS WE HAVE"

"The 16 million senior citizens of the United States today are in need of help." Roughly this many Americans are over age 65 at this writing. By 1970 they will number approximately 20 million, or 20 per cent of our population. It might be noted parenthetically that on the other end of the age scale approximately 30 per cent of our population in 1970 will be under 21 years of age.

It is a tribute to the skills and productivity of our sanitarians, our research workers, our specialists in preventive medicine and nutrition, and to our medical profession in general that this is so. But it is also a tribute to our political, socioeconomic, cultural and industrial complex that we have attained such high standards of living as to make this population growth and distribution feasible.

Progress has not been equally startling in the field of management-labor relations, politics, and certain other aspects of our society, so that by and large the "older than 65 years" group of our society is presently isolated, segregated, unorganized, and for the most part not contributing its full measure to the politics, productivity and culture of our Nation. In many respects medicine and the medical profession has not kept up with this change in our population distribution.

The time is long since past when we as a society can solve the problems of our aging persons by retiring them from work, pensioning them off, segregating them as an unproductive and privileged or abandoned segment of our population. They collectively represent a repository of the experience, the patience, the knowledge and productiveness of our country, and they now represent 20 per cent of our voting population. At any one time only about 5 per cent of the group is found to be totally disabled by disease or infirmity.

The remainder consider themselves or are considered by others to be in "good health" except for the "inevitable" changes and limitations of physical capacity to which the aged are considered heir.

Now, we as physicians must address ourselves to the care of the aging and the aged with the same skill and devotion that has heretofore characterized our care of younger people. While it is true that aging is accompanied by the scars of wear and tear, and of intercurrent disease and injury, it is equally true that the well-trained and well-motivated physician has in his possession the know-how to keep each older person at his maximum level of physical capacity and to minimize the harrassments of pain and other distressing symptoms that go along with age.

The typical older person who comes to the physician brings an acute complaint for which he expects prompt and effective treatment. He is prone to minimize or does not reveal any or all of a number of symptoms which he has accepted as being "just due to getting old" or which have that threatening implication to him or to others. These "other" complaints often include painful ambulation from a variety of causes or painful limitation of movement of the spine or the upper extremities. Other common complaints are related to the urinary tract and include prostatism, stress incontinence, frequency, and sometimes the polyuria of diabetes. Impairments of vision and hearing are commonly accepted. Dyspnea on exertion is so common as to be usual. Nutritional disturbances and dyspepsia go hand in hand in a great many of these people. These and many other symptoms and disabilities occur together in the same patient in a surprisingly large number of older persons and keep them from resting properly, from eating adequately, and from performing and feeling at their best.

The physician needs no special training in order to be able to provide quality care for older persons with multiple diseases in various stages, but he does need to be properly oriented and able to apply his skill to the whole person rather than to the relief of a single symptom. He must accept the fact that the older patient will require twice as much of his time at least as the younger patient and that the former will require more and different medications, and he himself must learn and teach his patients that this quality of medical care pays for itself and is worth paying for. In this age group the many medical disciplines incorporated under the concept of "rehabilitation" have their widest range of applicability, and the physician needs to know a great deal more about rehabilitation in its various aspects.

If we physicians who know most about medicine and its tools and technics approach the problem of the medical care of the aging in this fashion, we will have made a great stride in solving the multifaceted problem posed by the rapid aging of our population, and we will be practicing a kind of medicine that is designed and programmed by experts rather than the kind of medicine that is imposed upon society by political action.

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HIGH SCHOOL HEART RESEARCH PROGRAM

The Washington Heart Association High School Heart Research Program has completed its third annual competition. This project has provided a series of lectures on cardiovascular research to 400 students in the second, third and fourth years of high school who are either residents of the District of Columbia or attend one of the District's private or public high schools. All applicants are carefully screened by high school science teachers before they are permitted to participate in the program. All the lecturers donate their services free of charge. Lecturers are selected by a committee comprised of representatives from each of the 3 medical schools of the District of Columbia and the National Heart Institute. Previous programs included discussions of hypertension, cardiac catheterization, cardiac surgery, biostatistical studies relating to the cause of arteriosclerosis, and cardiac physiology.

The program this year consisted of a series of 3 presentations by the lecturers, who used slides, demonstrations, and kinescopes. The fourth period was devoted to a tour of laboratories at which research in cardiovascular diseases was in actual progress. Small groups of students were assigned to various laboratories throughout the City and at the National Institutes of Health, where the investigator described and discussed his project with the students and answered any questions that they cared to ask. At the completion of the session, an examination was given which consisted of objective questions of the true or false and multiple-choice type and 2 essay questions. Students were rated on the basis of accuracy, originality, capacity for organization of the material presented, and general content. The 10 winners, who achieved the highest rating on the examination, were awarded summer fellowships of $200, which included a 2-month assignment to a local scientific research project in heart disease. During the summer they become part of a research team and actually participate in the investigation of cardiovascular disease.

The goal of this program is to capture the interest of high school students in the years when their hopes and plans for the future are just emerging. Our program is designed to expose them to the satisfaction and excitement of medical research or a medical career. It is important that the medical profession compete with other highly publicized scientific disciplines that offer greater financial compensation for less arduous work. How essential it has become is shown by the fact that only 10 years ago there were 10 applicants for every place in medical schools, while during the past year the number of applicants has fallen to 2. The merit of this program is attested to by the fact that since its inauguration 3 years ago a similar project has been started at Georgetown University and 1 by the Montgomery County Heart Association, both of which are similar in purpose to the program inaugurated by the Washington Heart Association.

From the point of view of the doctors on the committee the program presents an opportunity to project to a new generation the ideals, aims and rewards which originally inspired them to espouse the profession, and to evoke in the students a desire to emulate. It is interesting that those of us who participated in this program experienced a reciprocal inspiration, perhaps through the youthful enthusiasm and exuberance of the audience. This was not the least of the rewards we received from working with these young people. The program also presented an opportunity to demonstrate in a forceful, direct way the image of the dedicated, hard-working, self-sacrificing American physician. We feel certain that much of the good will generated in the 400 high school students who participated filtered through to their families. This is good public relations.

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AMULET SAVES LIVES

A comparatively new organization has come into existence known as Medic-Alert Foundation. The Foundation was fathered by a small-town physician, Dr. Marion C. Collins, who is situated in an agricultural community in the San Joaquin Valley, California. Largely responsible for its existence was the near death of Dr. Collins' 14-year-old daughter in 1953. She had been given a routine scratch-test for allergy to tetanus antitoxin serum and reacted violently. The youngster was rushed to the hospital, where she was placed in an oxygen tent for 3 days before recovering from anaphylactic shock. The doctor and his wife were abroad and did not know of the near-fatal incident but realized that a full shot of tetanus might well have been fatal.

This inspired Dr. Collins to develop a method of protecting his daughter and other millions of people in similar circumstances. The result was the silver bracelet to be worn by men, women and children at all times who are "allergic to horse serum," afflicted with epilepsy, diabetes, hemophilia, or who are taking anticoagulants. The emblem is worn as a neck tag or a disk on a lady's charm bracelet. On its face there is a red caduceus and the warning "Medic-Alert." These are obtainable by writing to Medic-Alert, 1030 Sierra Drive, Turlock, California. Each member is assigned a serial number and is issued a membership certificate on which there is the serial number, name, address, medical problem, and any information which should be recorded. A duplicate of this certificate is on file in the Foundation's central office where emergency calls are accepted 24 hours a day for the purpose of identification in an emergency.

The Foundation is a nonprofit organization. Its staff of 11 persons receive no pay. Serving on its 5-member advisory board are an internist, an industrial toxicologist, a pediatrician from the University of California Medical Center, a Turlock deputy sheriff, and a San Francisco publicity expert.

There are some 40,000 patients across the country who now wear the Medic-Alert bracelet. The Foundation has set a goal of reaching 10 million cardiacs, 2½ million diabetics, 1½ million epileptics, and millions of other people who need protection. Several county and state medical societies have endorsed the Foundation, among them the Medical and Chirurgical Faculty of the State of Maryland, which has established a committee to promote the sale of the bracelets. The Executive Board of the D.C. Medical Society endorsed the Foundation at its meeting on April 24.

ANNUAL REPORT OF PRESIDENT OF MEDICAL SERVICE*

THE PAST YEAR has been a busy one for Medical Service. The greatest impact on our activities, of course, was made by our participation in the Government-wide service benefits plan for Federal employees. Fifty-four per cent of the Government workers throughout the United States are enrolled in this plan, and with the heavy concentration of Federal employees in the Washington, D. C. area, Medical Service has a great responsibility in relation to the successful operation of the program.

In connection with the Federal program, it has been necessary for us to support a program which, as far as the providing of benefits is concerned, is tailored to the abilities of all other Blue Shield Plans across the Nation. While there are many similarities between the benefits offered by our plan for non-Government subscribers and those furnished under the Government-wide service benefit plan, there are also a number of specific differences.

Another effect that the Federal program has had upon Medical Service activities is to increase the number of subscribers who have Major Medical or Supplemental coverage. More than half our enrollment—and nearly one-fourth of the total population of Metropolitan Washington—now is eligible to receive benefits for Major Medical expenses. Patients who have Major Medical coverage are encouraged to consult their physicians more often.

The fact that so many people in this area now have financial protection against catastrophic illness or injury places a great responsibility upon us as physicians. No fee schedules have been agreed upon for Major Medical programs, and yet subscription rates cannot be determined accurately unless the cost of services can be predicted. Consequently, it is necessary to determine reasonable and customary limits for charges for necessary physicians' services in all questioned cases. Since we did not feel qualified to make the judgment on what these limits should be, we referred the matter to the D. C. Medical Society. The Society, by a vote of its members, established a review board which has the responsibility of determining to what extent Major Medical benefits should be liable for individual fees.

Progress has also been made in another important direction. As we all know, there has been a strong trend in the past 2 years toward permitting elderly people to participate in pooled funds for health protection. Nowhere is this trend better evidenced than in the Government-wide service benefit plan, under which Federal employees are permitted to continue their health coverage after retirement, regardless of age. A recent joint action by Medical Service and Group Hospitalization, Inc. is in line with this trend. Effective April 1, 1961, the 2 organizations removed any barrier to enrollment because of age. Subscribers who enroll through groups are now subject to the same enrollment regulations and rates as all other members of the group, regardless of age. In addition, qualified persons who are not employed where a group could be formed may enroll directly, again regardless of age.

This does not mean that just anyone over 65 can now obtain hospital and Surgical-Medical coverage from Medical Service and Group Hospitalization. The limitations which heretofore have existed on direct enrollment will continue to apply. Many applicants will not be eligible for coverage for pre-existing conditions, and others may not even be qualified for enrollment for other reasons, but there will no longer be any discrimination on applications based on age alone. A problem with which Medical Service will be concerned in the immediate future is one which is of vital interest to Blue Shield Plans throughout this country. The Enrollment Committee of the National Association of Blue Shield Plans has been considering means whereby a uniform relationship between services and procedures can be offered by all plans. What is needed is an index of relative values which can be employed to insure that the benefits offered by a plan in one area have the same value as those offered by another plan located elsewhere. The actual dollar amounts offered in benefits for professional services should be left to the local plan. At its last meeting the Board of Trustees unanimously approved the principle of the use of a uniform relative value scale by Medical Service and other Blue Shield Plans servicing national accounts between our local and national account fee schedule. We are confident that the participating physicians in Medical Service will support this progressive program of action.

In addition to such projects, Medical Service will continue to study further expansion of our benefit structure to include more services of more physicians. The Medical Service effort to reëxamine the scope of its benefits is a continuous one, and I feel certain that ways will be found to make many improvements in our programs, subject, of course, to the willingness of subscribers to pay the additional subscription rates necessary to support the cost of such additional services.

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* Abridged from the report presented at the Thirteenth Annual Meeting of Participating Physicians of Medical Service of the District of Columbia, May 10, 1961.

After 9 years as a member of the Medical Service Board, and 2 years as its President, I shall no longer be continuing in these activities. It is with sincere regret that I leave these duties, for my work as Medical Service President and Trustee has been one of the most satisfactory experiences in my career. When I joined the Board in 1952, Medical Service had an enrollment of less than 400,000 subscribers and only about 1,500 participating physicians. At the end of 1960 there were more than 800,000 subscribers and 2,500 participating physicians.

This remarkable progress has been a great personal satisfaction. But the largest factor in this expansion—and my greatest asset as President of Medical Service—has been your consistent coöperation and support as participating physicians. I have appreciated this coöperation and support more than I can say, and I know that when my successor is elected, he will be able to count on your continued assistance.

James A. Dusbabek, M.D., *President*

ANNUAL REPORT OF THE PHYSICIANS' SERVICES COMMITTEE OF MEDICAL SERVICE*

This Committee has met at intervals of about 6 weeks for the consideration of cases submitted to it. The members have been faithful in their attendance and have put in long hours in serious consideration of all cases brought before it. As Chairman, I wish to express my thanks to the members, to Mr. McGovern, and to Mr. Spencer and Mr. Carpenter, as well as to Dr. A. C. Gray, all of whom have at times been with us during our meetings.

As has been the pattern in the past, there are a number of physicians who repeatedly appeal to the Committee or whose cases are referred to the Committee for study. This, I feel, is due to lack of understanding of the benefits allowable under Medical Service coverage and it is our hope that continued education will reduce the number of such cases. There are a few categories into which the great majority of cases fall. These I should like to review briefly.

1. Laboratory charges. There exists, it appears, the feeling that if the patient is covered by Medical Service, there is no reason to review critically what laboratory work is really essential and that which need not be run. This results in the appearance of very high laboratory fee totals in many cases. These often rise to billed charges of $1,200, $1,800 or $2,000. It is obvious that no plan can long remain solvent and pay such fees in full. Accordingly, it has been necessary, when fees for laboratory studies reach a certain limit, to apply a formula by which the total bill is reduced. This formula produces, in most cases, a dramatic reduction in the total payment. Analysis of these bills has shown repetition of tests to be the cause of the inflated charges. Repetition, when the same tests are ordered by the attending physician and the house staff, appears to be a marked offense. As an example, I believe the determination of the icterus index 3 times in the same day on the same patient is unjustified. I would question the twice-daily determination of the BUN as a routine over a 1-week period.

The problem may be easily solved if each physician will oversee the ordering of laboratory work on his patients to be sure the necessary work is done but not the unnecessary; to be sure the house staff knows why they are ordering a test and what the value will be in handling the case; to be sure orders for laboratory studies are not written and then allowed to run as standing orders when the need is over; and to remember that although the laboratory is unable to collect its full bill in many instances, it is powerless to control this situation unless forced to adopt stringent regulations regarding who orders any test and why.

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* Presented at the Annual Meeting of Participating Physicians of Medical Service of the District of Columbia, May 10, 1961.

2. A second item found before this Committee is the frequent submission of a claim for medical care during a hospitalization for surgery. It must be clearly stated here that such services are payable under the Surgical-Medical contract *only* when supplementary skills are necessary for the proper care of the patient. The fact that a patient has old arteriosclerosis or syphilis and has to have a cholecystectomy does not require the use of supplementary skills. The diabetic who needs insulin regulation during, before, and after surgery is an example of one who does need the use of supplementary skills.

3. Third, there are numerous appeals for higher fees than are paid under the benefit schedule. Appeals because of the presence of several surgeons, and appeals for higher fees because of multiple procedures are all covered in the Physicians' Handbook which is and has been in the hands of all participating physicians.

In summary, I believe that more familiarity with the contractual agreements and with the rules and regulations under which benefits are paid will not only reduce the work of the Committee but also will make each and every physician more aware of what is and what is not a benefit to his patient who is a subscriber to this plan.

C. Willard Camalier, Jr., M.D.
Chairman

ANNUAL REPORT ON ADMINISTRATIVE SERVICES OF MEDICAL SERVICE*

In 1960 Medical Service paid out $14,500,000 to physicians for services rendered its subscribers and added $1,130,000 to reserves. In 1961 we will pay substantially more for physician services and add less to our reserves. This situation is created in part by the fact that, while the Federal Employee Program provides an entirely new and substantial source of benefit under its supplemental benefit provisions, our reserve factor for the Federal program is limited by law. At the present time Medical Service is in a sound financial position, and your Board of Trustees is keeping close watch on the effect of the Federal Employee Program and other aspects of our operation upon the plan's financial experience. You may be sure that constructive action will be taken when there is need to take action, and that the interests of the physicians participating in the plan will be considered along with the interests of the subscribers whose funds we hold in trust.

Enrollment

In 1960 Medical Service underwent a radical change in its enrollment composition. Overnight approximately half our subscribers shifted from contracts which we had developed locally to reflect local practices and conditions, to contracts which were designed to encompass the best obtainable common denominator of benefits of many Blue Shield Plans throughout the country.

At the close of 1960, Medical Service was protecting 817,867 subscribers. Of these, 397,039 were covered under the Federal Employee Program and 420,828 were covered under other programs which Medical Service makes available to those members of the community who are not Federal employees.

Medical Service is now the fourteenth largest Blue Shield Plan, and it continues to lead all Blue Shield Plans in the percentage of population enrolled. This is a most significant situation since, statistically speaking, 2 out of every 3 of your patients are enrolled in a Blue Shield program in which you have a voice and continuing influence.

Claims

During 1960 our Claims Department processed 390,479 claims, or approximately 1,543 every working day. This claims load represents a 17 per cent increase over our claims experience in the preceding year, and reflects in part the increased use of physician services by patients who have experienced a release of economic restraints. While the number of claims for diagnostic office services was reduced because of the exclusion of this benefit under the Federal Employee Program, the incidence of claims for other services increased substantially.

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* Abridged from the report presented at the Annual Meeting of Participating Physicians of Medical Service of the District of Columbia, May 10, 1961.

OPERATING EXPENSE

Despite the increase in claims incidence and the disproportionate cost of processing Major Medical and Supplemental claims, Medical Service kept its operating expense to 6.6 per cent of earned subscription income, as opposed to an operating expense factor of 8.6 per cent of earned subscription income in the preceding year. The reported operating expense of all Blue Shield Plans amounted to 10 per cent of earned subscription income, and we feel that the Administrative Agency is deserving of real tribute in keeping costs to two-thirds the average reported operating expense of other plans.

PARTICIPATING PHYSICIANS

Physician participation in Medical Service continues to increase; at the present time there are 2,546 physicians participating in the program, or 144 more than at the same time last year. Fifty-eight physicians are serving on the Board of Trustees and various committees related to Medical Service, and by this participation in the activities of Medical Service, practicing physicians acquire a strong voice in the management of their own prepayment program. Physicians are constantly contributing their time and interest to the medical problems affecting the program, and the voice of the physician in the affairs of Medical Service gives needed direction to the administration in the accomplishment of its duties.

GEORGE B. MCGOVERN
Executive Vice President

NEW CLINICAL CENTER STUDIES

The coöperation of physicians is requested in obtaining patients for a comprehensive study of familial Mediterranean fever (periodic fever, paroxysmal peritonitis) recently initiated at the Clinical Center, National Institutes of Health, Bethesda, Md. The study, conducted by the National Institute of Allergy and Infectious Diseases, is to explore some of the etiologic possibilities and to study intensively immunologic, physiologic and metabolic aspects of patients with familial Mediterranean fever. A pilot study of therapeutic agents in this disease is anticipated.

Familial Mediterranean fever is a disease usually, but not always, seen in individuals of Armenian, Sephardic Jewish or Arab descent. The disease is characterized by recurrent episodes of fever, abdominal pain and often joint and/or chest pain. Although previously thought to be a benign disease, there is now evidence that some of these patients develop amyloidosis.

Patients are needed who are having episodes of abdominal and/or chest pain associated with fever. The episode should be of short duration and the pain suggestive of peritonitis and/or pleuritis. Patients may be at any stage of their disease, with or without amyloidosis, and may be of either sex and any age. Cold-sensitive patients or those demonstrating a seasonal variation as to incidence of attacks are especially sought.

When admitted the patients undergo a thorough clinical evaluation and period of observation. They should be prepared to undergo studies between and during attacks. Gastrointestinal studies and response to cold stress utilizing a metabolic chamber are planned.

Because of the extent of the study, a prolonged stay (6 weeks or more) should be anticipated. When possible, a therapeutic program will be instituted. Upon completion of their studies the patients are returned to the care of their referring physicians to whom complete narrative summaries are sent. It is sometimes desirable to arrange for occasional follow-up visits by the patients. These would supplement rather than substitute for visits to the patient's own physician.

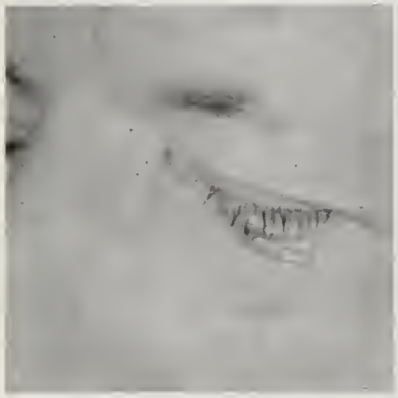
Physicians interested in the possibility of referring individual patients should write or telephone Dr. Sheldon M. Wolff, National Institute of Allergy and Infectious Diseases, Bethesda 14, Md., Oliver 6-4000, Extension 4831.

The Chemotherapy Service of the National Cancer Institute is initiating studies on the chemotherapy of medulloblastoma with regional antimetabolites at the Clinical Center.

(*Continued on page 504*)

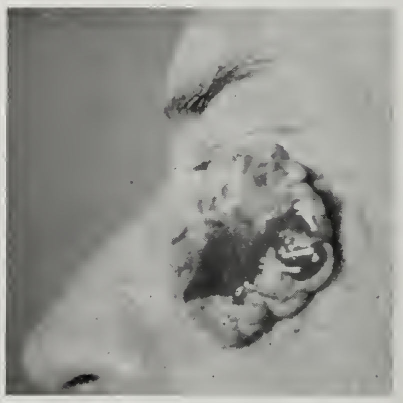
THE OBSERVANT DOCTOR . . . .

BIOPSIES THIS



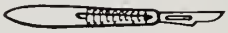
Early Skin Cancer

TO PREVENT THIS



Advanced Cancer of the Skin

REMEMBER: All suspicious skin lesions should be biopsied with a scalpel



and examined microscopically to confirm the diagnosis

AMERICAN CANCER SOCIETY
District of Columbia Division, Inc.
810 18th Street, N.W.
Washington 6, D.C.

GROUP AND PARTNERSHIP PRACTICE

EDWIN P. JORDAN, M.D.

Executive Director, American Association of Medical Clinics

The practical problems of large groups are similar to those of small partnerships, only more complicated. The more physicians involved the more complex are the problems. Therefore, my remarks are in regard to small partnership practice, and if any of you are interested in large groups, you have only to let your minds increase the complexities.

Advantages and Disadvantages of Partnership Practice

I should like to say a few words about the advantages and disadvantages of partnership practice as compared with what is commonly called solo or individual practice.

There are both. From the standpoint of the public, perhaps the principal advantage is that the partners can generally stagger their time off so that one of them is available to the patient all of the time.

The principal disadvantage to the public may be illustrated by two partners in obstetrics. The patient may prefer one of them, but when it comes time for the patient to deliver, the one she prefers may be attending a medical meeting or be out fishing. And the patient then gets the partner whom she does not like quite as well.

ACKNOWLEDGMENT

This is the fifth in a series of talks given at the Forum on General Problems in Medical Practice, held at the Hotel Statler-Hilton in Washington, D. C., October 29, 1960, under the auspices of the Medical Council of the Washington Metropolitan Area. Host: Peoples Drug Stores, Inc. Reprints may be obtained upon request from the Medical Society of the District of Columbia, 1718 M Street, N.W., Washington 6, D. C.

This is a personality question in most instances. Occasionally it may be a question of competence, but it is usually personality.

Actually, from the standpoint of general competency, it is very rare to find partners, either a few or many, who are not roughly similar in their outlook and training. They just simply do not get along together as partners unless they are professionally competent, and approximately equally so.

Likewise to the physicians involved there are certain advantages and disadvantages of the partnership over the solo practice. The advantages are related to those I just mentioned for the public. Partners are able to share their work more easily and to alternate nights off and week ends and can frequently live somewhat more like human beings than the solo practitioner who risks losing his patients, or neglecting them, if he takes the necessary time away from his practice.

The principal disadvantage of the partnership is that the physician gives up a certain amount of independence when he becomes associated in the intimate relationship required in a partnership. This is commonly likened to the independence which they say is sometimes given up when a man marries. The rugged individualist who must always have his own way may find it difficult in a partnership to behave exactly as he would before. He must give some things up in order to receive others.

A physician in a 2-man partnership—or 2 men in a large group as far as that is concerned—can't both, as a rule, go to the meeting of the American Medical Association, or both go hunting at the same time. Although both may want to go one of them will have to stay at work.

Criteria for Successful Partnerships

What are some of the criteria for the successful association of physicians? The first and most important, I believe, is professional and personal compatibility. There is no use whatsoever in any kind of intimate association between physicians who do not respect each other's professional activities, or who dislike each other personally.

I might extend this to the personal compatibility of the wives of those who are associated as partners. It is true, particularly in big cities, that wives need not see too much of each other socially, but even here real incompatibility is a great hazard to any kind of intimate professional association.

The second important criterion is that each person in the partnership, whether there are 2 or several, must desire to be fair with his colleague or colleagues in regard to the division of work and the division of income. I shall come to the latter point again a little later.

Age and training of the 2 or more partners enter into the picture. But the professional and personal compatability and the essential desire to be fair with each other are surely the most important.

Perhaps the best way to approach this is to take a simple example. Although most of my work has been with large groups, I have served as consultant in the formation of many small partnerships and in resolving their difficulties. The latter included a surgeon who wished to take in a younger surgical partner and a general practitioner whose practice had grown to the extent that he was taking in 3 younger practitioners simultaneously. That was slightly complicated, I might say.

But a simple example is the physician who wishes to take in a younger associate in the same field of practice. How should he approach the situation? The first step—for either the younger or the older man—is to search around for a potential colleague with whom he thinks he would be professionally and personally compatible.

The Partnership Agreement

The attitude of the 2 involved is extremely important. But a partnership involves a legal document. Whether this is a large or small partnership, certain things should be written out and signed as an agreement. This document should be prepared after consultation with a lawyer and an accountant, and of course agreement between the 2 or more parties to the partnership agreement is necessary.

The legal document generally contains a considerable number of items such as the times that each member is expected to be on call, what his professional contribution is supposed to be, how the division of work on week ends and vacations is to be determined, etc. And most difficult of all, it should contain the manner in which the income from the partnership is to be divided among the partners.

Sample partnership agreements are available. All of them, of course, have to be modified for particular circumstances, and there are check-lists of items which may be included.

The most difficult problem generally facing either a large or small partnership is the division of income. Before discussing some of the general principles, I might mention what is a common attitude regardless of whether the partnership is large or small.

The older man feels quite justly that he has built up a practice by himself; he has worked hard for 20 years doing this; he would like to slow down a little bit, but he still wants to work hard. He feels that this entire practice is *his* practice, and he resents, or rather fears, the possibility that a younger man or younger men will come along and take this over and push him out of something that he has built up.

This is a subconscious attitude, as a rule. The younger man or men also hold a valid attitude when they enter a partnership. They feel that they have been the low boy on the totem pole ever since weaning; there has always been somebody telling them what to do. They had it in high school, they had it in college, they had it in medical school, they had it in internship, they had it in residency. Now that they are fully licensed physicians, perhaps Board-certified, here they still are, at the bottom of the heap. And this they feel is carrying things a bit too far. They think that all they have, perhaps all they will ever have, is obligation without any responsibility or weight themselves.

So they usually find it extremely difficult to understand the point of view of the older man, just as the older man frequently finds it difficult to understand the point of view of the younger one.

This psychology enters into all of the items included in the partnership agreement, including how the income is to be divided, although it can be resolved in most instances.

Let me take an example. Suppose the "older" physician is earning about $30,000 annually. When he takes in a younger man, the income is most unlikely to increase to $60,000 for some time. In fact, the senior man may realize less income when he adds an associate than he did before.

Consequently, the general pattern of association in a partnership or in a group is for the new physician, the younger physician, to be on a salary from the senior partner or group for a period which has been found by trial and error, in a great many places over a great many years, to run generally for from 2 to 3 years.

I say this with some confidence because that period of time has cropped up independently in so many places, so many times, that it must work out fairly well.

At the end of, say, 2 years, both the junior and senior physicians ought to know whether they want to go into partnership and what the terms of that partnership ought to be. By then they can decide whether to call it quits or enter into this more intimate relationship.

In large groups the total time for a new man to reach financial parity with the older men is generally about 10 to 12 years, including the 2 years on salary.

In the smaller partnerships, the time is generally less. Usually this has to be arranged by agreement whereby there is a gradual progression. There should be a clear understanding as to what is involved in the financial arrangement.

In many instances, and in almost all instances in larger groups, the property is owned separately from the practicing partnership. It may be owned by one or all of the partners. It may be a stock company. Or it may be set up in any one of several other ways. But it is almost invariably wise that a substantial, professional investment be separated from the professional activity involved in the practice of medicine of the partners.

Finally, while a partnership agreement is a legal document, I think it is safe to say that it is impossible to anticipate all of the problems which may arise in even a 2-man partnership in the course of a professional career. Consequently, the matter of good faith in attempting to solve the problems which are not in the partnership agreement is of the utmost importance to make a satisfactory, workable professional relation.

There are some physicians in both small and large groups who are what I like to call sea lawyers. If you look that up in the dictionary, you will find that it refers to a contentious sailor who likes to argue points of sea law, usually on the basis of slight or inaccurate knowledge. Some physicians, unfortunately, are like that.

Thus, sometimes, you will have a member of a group or partnership who is always going back into the fine print of the legal document and saying this is the way it should be interpreted and not this way, and is constantly arguing about minor points. It is better for them and better for those remaining to separate as rapidly as possible, because this certainly does not augur well for a satisfactory, professional relationship in a partnership or group.

NEW HOME FOR RETARDED CHILDREN

On June 19, 1961 the Home for Retarded Children, established by the Jewish Foundation for Retarded Children, Inc., was officially opened. This new facility is located at 6200 Second Street, N.W. This site formerly housed the Swartzell Home for Children. The Jewish Foundation, a nonprofit, nonsectarian group, has completely renovated and refurnished this building to provide both a day care center for 30 children and in September, 1961 a residential program for approximately 32 retardates.

In addition to the day care and residential facilities, the Home will attempt to provide a much needed "way-station" concept, offering temporary placement for children in 3 special categories:

1. Retarded children needing immediate institutionalization. These could be housed for several months; the social service staff will aid with the permanent placement decisions if desired.

2. Retarded children whose parents are unwilling or unable to recognize the need for institutionalization. It is felt by many authorities that observation of the child in an institutional setting for a short period may be beneficial for the parents' acceptance of the doctor's recommendations.

3. Newborn infants suspected of being retarded. These would be admitted for short-term care and diagnostic observation.

The Jewish Foundation's Home is directed by E. Paul Benoit, Ph.D., formerly Coördinator of Research at Partridge School and a nationally known authority on mental retardation. The medical staff, all voluntary, is made up of approximately 25 physicians and 20 dentists, representing all specialties, under the direction of Stanley I. Wolf, M.D., and A. Harry Ostrow, D.D.S.

If present plans are approved, several junior students from Georgetown Medical School will live at the Home. Altogether this program should provide complete medical and dental care for the children.

The private or referring physician will be encouraged to follow his patient while in residence; any problem arising will be discussed with the private physician.

Anyone desiring additional information should contact the Home, Randolph 6-1090.

DOCTORS BOWLING LEAGUE DINNER

Members of the new Doctors Bowling League report a very successful and pleasurable 1960-61 season. They held their first banquet on May 31 at the Kenwood Country Club, to which were invited the wives or sweethearts of the bowlers.

Individual prizes were awarded to the following bowlers: high League average, Dr. Dick Meyers, 113 plus 38 pins; second high average, Dr. Israel Kessler, 107 plus 26 pins; high League strikes of 37, Dr. Frank Bacon; second high strikes of 31, Dr. John Hughes; high spares of 157, Dr. Earl Kadan; second high spares of 124, Dr. George Resta; high set of 393, Dr. Timothy Tehan; second high set of 371, Dr. Al Kay; high game of 145, Dr. Clyde Reeves; second high game prize divided between Bob Chapman and Joe Wisler, each with 134.

The final team standings were:

TEAM	WON	LOST
1. Children's	55	26
2. Columbia	55	26
3. Georgetown	49	32
4. Lederle	34	47
5. St. Elizabeths	31	50
6. Casualty	25	56

Books Received

Acknowledgment is nade of the following books which have been recently received. Selections will be made for more extensive reviews in the interest of our readers and as space permits. Physicians are urged to submit reviews of additional books which, in their opinion, merit comment.

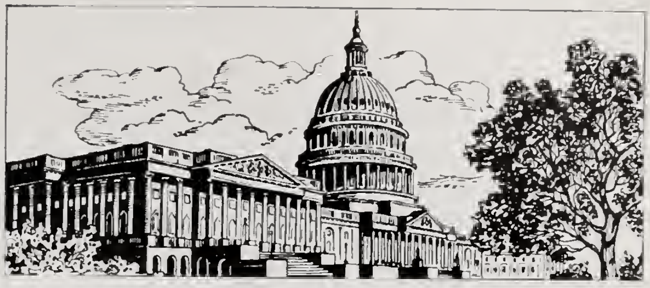
A Manual of Cutaneous Medicine. DONALD M. PILLSBURY, M.A., D.Sc. (HON.), M.D., F.A.C.P., Professor and Chairman of Department of Dermatology, University of Pennsylvania School of Medicine; Director, Commission on Cutaneous Diseases, Armed Forces Epidemiological Board; President, XII International Congress of Dermatology; WALTER B. SHELLEY, M.D., PH.D., F.A.C.P., Professor of Dermatology, University of Pennsylvania School of Medicine; National Consultant in Dermatology to the Surgeons General, U. S. Army and U. S. Air Force; AND ALBERT M. KLIGMAN, M.D., PH.D., Professor of Dermatology, University of Pennsylvania School of Medicine; Professor of Dermatology, University of Pennsylvania Graduate School of Medicine. Price, $9.50. Pp. 430. Philadelphia: Saunders, 1961.

Handbook of Pediatrics, 4th ed. HENRY K. SILVER, M.D., Professor of Pediatrics, University of Colorado School of Medicine, Denver, Colorado; C. HENRY KEMPE, M.D., Professor of Pediatrics and Head, Department of Pediatrics, University of Colorado School of Medicine, Denver, Colorado; AND HENRY B. BRUYN, M.D., Associate Professor of Pediatrics and Medicine, University of California School of Medicine, San Francisco, California; Assistant Clinical Professor of Pediatrics, Stanford University School of Medicine, Stanford, California; Director of Student Health, University of California, Berkeley, California. Price (paper), $3.50. Pp. 576. Los Altos, Calif.: Lange, 1961.

Ciba Foundation Symposium Jointly with Committee for Symposia on Drug Action on Adrenergic Mechanisms. Editor for the British Pharmacological Society: J. R. VANE, B.Sc., D. PHIL.; Editors for the Ciba Foundation: G. E. W. WOLSTENHOLME, O.B.E., M.A., M.B., M.R.C.P., AND MAEVE O'CONNOR, B.A. Price, $12.50. Pp. 632, with 163 illustrations. Boston: Little, 1961.

Clinical Disturbances of Renal Function. ABRAHAM G. WHITE, M.D., F.A.C.P., Associate Visiting Physician and Chief of the Renal Disease Clinic, Queens Hospital Center, Jamaica, N. Y. Price, $10.50. Pp. 468. Philadelphia: Saunders, 1961.

Handbook of Surgery. Edited by JOHN L. WILSON, M.D., Chief of Surgery, Veterans Administration Hospital, San Francisco, California; Associate Clinical Professor of Surgery, University of California School of Medicine, San Francisco, California, AND JOSEPH J. McDONALD, M.D., Dean of the Faculty of Medical Sciences, American University of Beirut, Beirut, Lebanon; formerly Professor of Surgery, Columbia University, New York. Price (paper), $4.00. Pp. 646. Los Altos, Calif.: Lange, 1960.



NEWS & PERSONALS

General News

Dr. James W. Watts, Chairman, presided at the meeting of the **Executive Board of the Medical Society of the District of Columbia** on June 19, 1961. The Treasurer presented to the Board a list of the Bequest Funds which have accrued to the Medical Society over the past many years, and the Board requested that the list and the purpose for which each was established be published in the MEDICAL ANNALS.

Dr. Leland S. McKittrick, Chairman of the AMA's Council on Medical Education and Hospitals, requested President Stubbs to appoint 3 representatives of the Medical Society to participate in a conference in New York prior to the opening session of the AMA meeting. Dr. Stubbs said he would serve as one of the participants and recommended the appointment of Drs. James E. Fitzgerald and Alfred Brigulio as the other representatives of the Society. The Board accepted these appointments.

Dr. Stubbs appointed Dr. Daniel L. Weiss to serve on the Committee on Public Information and Education. He also appointed Dr. James E. Fitzgerald to succeed Dr. W. Proctor Harvey, who had resigned as Chairman of the Committee on Postgraduate Education. These appointments received the Board's approval.

Dr. William P. Herbst was reëlected **President of the District of Columbia Division of the American Cancer Society,** June 8, during its 15th Annual Meeting in the Medical Society's auditorium.

A special feature of the occasion was the presentation of the St. George Medal and Citation for distinguished service in cancer control to Dr. Harold W. Krogh, well known Washington dental surgeon. Dr. Krogh was reëlected Vice President of the Society. He has served on its Board of Trustees for 8 years.

The principal speaker at the meeting was Dr. Dean Fletcher Davies, Consultant to the American Cancer Society and the Cancer Control Program of the Public Health Service. He discussed smoking and lung cancer.

Mr. Evert F. Nelson, 1961 Cancer Crusade Chairman, announced that contributions had reached a total of $393,568.92, far exceeding the goal of $385,000. This is the greatest amount ever contributed to the American Cancer Society in the Washington Area. Sixty per cent of all funds remain in the District of Columbia to support year-round programs of education and service. The 40 per cent sent to the national organization is devoted largely to research.

Other officers, also reëlected, were: Philip A. Hanigan, Jr., and Frank H. Weitzel, Vice Presidents; Dr. C. Roger Kurtz, Secretary; and Frederick P. H. Siddons, Treasurer.

Dr. Henry L. Darner was elected **President of Medical Service of the District of Columbia** at the annual meeting of the Board of Trustees, May 25. He succeeds Dr. James A. Dusbabek, who has served as President for the past 2 years.

Dr. Darner has been actively identified with Medical Service since it began operations in 1948, and he was one of its original incorporators. He became a member of the Board of Trustees in 1951 and was elected First Vice President in 1959.

The title, Clinical Professor Emeritus of Obstetrics and Gynecology was conferred upon Dr. Darner at recent commencement exercises of George Washington University School of Medicine, where he has been a member of the Executive Teaching Faculty. Before Emergency Hospital merged into the Washington Hospital Center he was Gynecologist-in-chief, chairman of its medical staff, and Secretary of the Hospital's Board of Trustees. He is currently senior consultant at a number of area hospitals, including the Washington Hospital Center, Doctors Hospital, Sibley Memorial Hospital, Glenn Dale Hospital, and the U.S. Army Medical Center. A graduate of Johns Hopkins University School of Medicine, Dr. Darner received his premedical education at Western Maryland College, where he is a member of the Board of Trustees. Western conferred upon him an honorary Doctor of Science degree in 1956.

HENRY L. DARNER, M.D.
New President of Medical Service

He is a Fellow of the American College of Surgeons, Vice President of the American Association of Obstetricians and Gynecologists, and a diplomate of the American Board of Obstetrics and Gynecology.

Other officers elected at the meeting were: Robert M. Holmes, First Vice President; Dr. Henry D. Ecker, Second Vice President; and J. Russell Bolton, Assistant Treasurer.

Reëlected were: Douglas R. Smith, Treasurer; Nelson J. Foster, Assistant Treasurer; George B. McGovern, Secretary; and Dr. A. Clagett Gray, Assistant Secretary.

Three new trustees were elected to the Board at the Annual Meeting of Participating Physicians, May 10, 1961. They are: Douglas R. Smith, who succeeds the late Bruce Baird; Dr. Read N. Calvert, who succeeds Dr. John S. Haught; and Dr. Edward W. Nicklas, who succeeds Dr. James A. Dusbabek. Dr. Nicklas will serve for 3 years; Mr. Smith and Dr. Calvert, 1 year. Trustees reëlected for 1-year terms were Drs. Halsey Hunt, Frederick C. Heath, Peter Soyster, and Messrs. Holmes, Philip M. Talbott, and Robert C. McCann.

Providence Hospital observed its **100th Anniversary,** Saturday, June 10, with a mammoth celebration on the grounds of its new quarters at 12th and Varnum Streets, N.E.

More than 3,000 guests, including former patients as well as doctors and nurses who have served on the Providence staff, were invited to the Centennial Celebration, which opened at 11 a.m. with a Solemn Pontifical Mass in the National Shrine of the Immaculate Conception. The Mass was celebrated by the Most Reverend Patrick A. O'Boyle, Archbishop of Washington. The Right Reverend Monsignor John K. Cartwright, P.A., Rector of St. Matthews, delivered the sermon. The Anniversary Mass was sung by a choir of 150 novices from the Central House of the Daughters of Charity of St. Vincent de Paul at Emmitsburg, Md.

A buffet luncheon was served on the Hospital grounds after the services.

Providence Hospital, founded on June 10, 1861, is Washington's oldest general hospital still in service. This issue of the MEDICAL ANNALS commemorates the event with a history of Providence, prepared by a special Committee on Publications; also, the entire scientific section is contributed by staff members of the Hospital. The first editorial is written by Sister Eleanor, the present President and Administrator of the Hospital.

A new **General Clinical Research Center** will be opened this fall at **Georgetown University Medical Center.** Dr. Hugh H. Hussey, Dean of the School of Medicine, announced that this will be made possible by a grant of $300,000 from the National Institutes of Health. The Center will be under the direction of Dr. George E. Schreiner, Associate Professor of Medicine.

The project is part of a program established in 1959 by the National Institutes of Health, at the direction of the Senate Appropriations Committee, and is aimed at an enlargement and intensification of clinical research in a broad spectrum of diseases. Twelve other grants in 10 states, totaling $3,892,416 for a year of operation, were made by Surgeon General Terry on recommendation of the National Advisory Health Council and a panel of non-Federal scientists and administrators in the field of medicine.

The Georgetown Center will bring to 32 the number of General Centers established since the program was initiated. The grant funds pay for the renovation and equipment of the Centers, the costs of the care of research patients (including specialized nursing, diet kitchens and other services), supporting laboratories, and certain staff salaries. The west wing on the second floor of the Georgetown Hospital will be converted to accommodate the new unit.

Washington psychiatrists and other invited guests were given an opportunity to inspect the **new psychiatric unit** on the seventh floor of the west wing of the new **Sibley Hospital,** June 18. The unit will be under the direction of Dr. Zigmond M. Lebensohn. Dr. Lebensohn said the facility was arranged according to concepts of Dr. Humphrey Osmond, of Saskatchewan, Canada, prominent British psychiatrist. It provides for three types of psychiatric care, i.e., maximum security, facilities suited for treatment of the majority of mental patients, and accommodations for the convalescing patients.

A group of 58 foreign physicians (48 men and 10 women), teachers and administrators in the health sciences, assembled at Georgetown University School of Medicine for a 3-day **Conference on American Medical Education,** June 14, 15, and 16. The participants represented 13 foreign countries, including Afghanistan, Brazil, Costa Rica, Egypt, El Salvador, India, Indonesia, Iraq, the Philippines, Thailand, Taiwan, Viet Nam and Yugoslavia.

The program was sponsored by the Public Health Service, under the supervision of Dr. Howard M. Kline, Chief, International Education and Exchange Branch, Division of Community Health Practice, with the assistance of Mr. Daniel D. Swinney, Program Director of the same agency. The Georgetown committee which organized the meeting was comprised of Dr. Walter C. Hess, Associate Dean of the School of Medicine; Dr. Bruce I. Shnider, Assistant Dean of the School of Medicine; and Mr. L. Dallas Uhrig, Administrative Assistant to the Dean of the School of Medicine. Members of the Medical School faculty acted as consultants in the group discussions held during the Conference.

The George Washington University Medical Alumni Association held its annual banquet, June 3, at the Mayflower Hotel. Highlight of the occasion was the awarding of individual official University chairs to 7 Professors Emeriti of the School. The chairs, a gift of the medical faculty, are "captain's chair" in design, and carry the seal of the University on the front and a metal plate with the name of the recipient on the back.

Two of the recipients, Dr. Henry L. Darner and Dr. Charles R. L. Halley, were elevated to emeritus status at the University's commencement exercises, June 7. Other chair recipients, all Professors Emeriti, were Drs. Ralph G. Beachley, Walter A. Bloedorn, Daniel L. Borden, Frederick A. Reuter and Charles Stanley White.

Dr. Peter D. Comanduras, Director-General of MEDICO, the principal speaker at the banquet, described the work of his organization and announced that he was going to seek affiliation with the various specialty boards and colleges to provide medical teams for work in underprivileged countries.

Presiding at the dinner was Dr. Edward E. Ferguson, President of the Alumni Association.

The D. C. Dental Society installed Dr. Israel Shulman as its President, June 13. Other officers who will serve during the coming year are:

Dr. Albert K. Leon, *President-elect*; Dr. James P. Kerrigan, *Vice President*; Dr. Balfour D. Mattox, *Secretary*; and Dr. Woodson T. Birthwright, *Treasurer*.

At a dinner meeting and election of officers, June 23, the **Mid-Atlantic Chapter of the American Medical Writers' Association** elected Dr. Robert J. Benford as President, succeeding Dr. Robert P. Odenwald. Dr. Benford is Director of Medical Relations of the Pharmaceutical Manufacturers' Association. Colonel John B. Coates, Jr., M.C., U.S.A., Director of The Historical Unit, U.S. Army Medical Service, was chosen Vice President. Reelected to office were Miss Evelyn Trowbridge, Bethesda, Secretary, and Dr. A. Rubin, Washington, Treasurer.

New Directors of the Chapter are: Julius N. Cahn, Bethesda; Miss A. Louise Eckburg and Gerald G. Gross, Washington; Dr. Amos R. Koontz and John Sargeant, Baltimore; Miss Virginia Watson, Arlington, Va.; and Dr. Frank E. Wilson, Washington.

Dr. Theodore R. VanDellen, President of the national AMWA and well known for his syndicated health column, was the principal speaker at the meeting.

Dr. Stanley J. Sarnoff, Chief of the Laboratory of Cardiovascular Physiology, National Heart Institute, has received the 1961 Malcolm Rogers Memorial Award for excellence in the field of heart disease. The award carries an honorarium of $500. He delivered the Annual Memorial Lecture in Milwaukee, June 10, at a scientific meeting of the Wisconsin Heart Association.

Dr. Sarnoff, a graduate of Johns Hopkins Medical School, has been head of the cardiovascular laboratory at the Institute since 1954. He was recently elected Vice President of the American College of Cardiology. He was also selected for two lectureships this year, the Halliburton Memorial Lecturer by King's College, London, and the St. Cyres Lecturer by the National Heart Hospital of the Royal Society of Medicine, London.

Dr. Sanford M. Rosenthal, Chief of the Laboratory of Pharmacology and Toxicology of the National Institute of Arthritis and Metabolic Diseases, has retired from the Public Health Service.

During his 33 years with the Public Health Service, Dr. Rosenthal contributed information in the fields of arsenic, sulfonamide drugs, liver function tests, an antidote for mercury poisoning, among others. In 1931 he introduced the bromsulfalein test for liver function.

Internationally known for his research in the field of burns, Dr. Rosenthal will continue his research studies with the Institute as a special consultant in pharmacology and will spend the next year supervising the Institute's burn shock project in Lima, Peru.

Personals

Dr. Edgar W. Davis, who has served on the Board of Governors for the American College of Chest Physicians during the past several years, was promoted to membership in the Board of Regents at the recent meeting of the College in New York, which was held prior to the AMA Convention. Dr. Davis is Professor of Thoracic Surgery at Georgetown University School of Medicine and President of the Medical Staff of the Washington Hospital Center.

Dr. Thomas W. Mattingly, Director of Medical Education at the Washington Hospital Center, was elected to fill Dr. Davis's place on the Board of Governors.

Dr. Leroy E. Burney, formerly Surgeon General of the Public Health Service, has been appointed to the newly created position of Vice President for the Health Sciences at Temple University, Philadelphia, effective July 1. In his new position he will have administrative responsibility for all educational activities relating to the health sciences at Temple University: the hospital, the schools of medicine, nursing, medical technology, dentistry, pharmacy, and oral hygiene.

Dr. Burney, who is an Honorary member of the Medical Society of the District of Columbia, is President this year of the Association of Military Surgeons of the United States.

Dr. Edwin S. Kessler, Washington psychiatrist, has been appointed to the District Commissioners' Youth Council to serve for a 3-year term.

Dr. Kessler, a native of Cleveland, Ohio, received his medical degree from Western Reserve University in 1942. After serving as Medical Director of Hillcrest Children's Center from 1953 to 1956, he joined the faculty of Georgetown University School of Medicine, where he is Clinical Assistant Professor of Psychiatry. He is a diplomate of the American Board of Psychiatry and Neurology and a Fellow of the American Psychiatric Association.

Obituaries

JOSEPH P. MADIGAN, B.A., B.S., M.A., M.S., M.D., Sc.D., LL.B., LL.D.

(1891–1961)

Dr. Joseph P. Madigan, retired roentgenologist, died, June 11, 1961, at Georgetown University Hospital.

A native of Washington, D.C., Dr. Madigan was born, March 19, 1891. He graduated from Gonzaga College, and received his Master of Arts, Doctor of Science and medical degree from Georgetown University, the last in 1916.

He served with the Army Medical Corps in France during World War I. After the War he continued in the Army for a few years, serving at various posts in the United States. He resigned from the Army as Lieutenant Colonel in the early 1920's. He returned to Washington and for 10 years was Professor of Anatomy at Georgetown and head of the department. After resigning from the faculty he was engaged in the private practice of roentgenology until his retirement 10 years ago.

Dr. Madigan earned a Bachelor of Laws degree from LaSalle University in Illinois many years ago. He was often called upon as an expert medical witness. In recognition of his work in the medicolegal field he received an honorary law degree from Gonzaga College.

Dr. Madigan was an Active member of the Medical Society of the District of Columbia from 1931 to 1950. While in practice he was a member of the American Medical Association and the Southern Medical Association. He contributed several articles to technical publications.

He was a member of St. Ann's Catholic Church.

He is survived by his wife, Mrs. Eileen Keady Madigan, and a son, Joseph A. Madigan, of the home address, 5115 38th Street, N.W.; a daughter, Mrs. Angela M. Power, of Bethesda, Md.; and two sisters, Miss Mary A. Madigan and Mrs. Abram Levin, of Washington.

JOHN MARION BABER, LL.B., LL.M., B.S., M.D.

(1895–1961)

Dr. John M. Baber, who had a successful career in both medicine and law, died, June 14, 1961, at Doctors Hospital. He had practiced most recently in West Palm Beach, Florida.

Dr. Baber was born in Farrell, Mississippi, March 15, 1895, to John M. and Ida Maupin Baber. He enlisted in the Army in 1915 and served in the Mexican Border campaign. Throughout World War I he served as an officer, returning to inactive duty with the rank of Captain.

Dr. Baber studied law at Georgetown University, graduating in 1922, and served as an attorney with the Justice Department. He was active in prosecuting war-fraud cases. He was admitted to the Bar of the District of Columbia, the Bar of the United States Supreme Court, the Bar of the District of Columbia Court of Appeals, and all Federal departments. In 1923 he entered private legal practice.

After 2 years of law practice he enrolled at George Washington University School of Medicine, meanwhile maintaining his law practice. He received both his B.S. and his medical degree from George Washington, the latter in 1929. He interned at old Emergency Hospital. In 1930 he began the private practice of medicine in the District of Columbia in the same offices at 1819 G Street, N.W. which he maintained throughout the years. He later took postgraduate studies in otolaryngology at the University of Illinois and also studied abroad.

During his medical career he served as consultant in forensic medical cases. He was a Selective Service Examiner during World War II.

He wintered for several years in West Palm Beach and moved his practice there in 1952, with offices at 3632 South Dixie Street. He became President of the American Academy of General Practice in Palm Beach County and was admitted to the Florida Bar.

He was elected to Active membership in the Medical Society of the District of Columbia in 1931 and transferred to Associate in 1951, prior to moving to Florida. He resigned his membership in 1959. He was a member of the American Medical Association, the Southern Medical Association, and the George Washington University Medical Society. He was also certified by the American Board of Legal Medicine. He was a member of the Palm Beach County Shrine Club and the Almas Temple Shrine. His church affiliation was with the First Baptist Church of West Palm Beach.

He is survived by his wife, Mrs. Alice S. Baber, of West Palm Beach, and four brothers: Dwight, of West Palm Beach; Leonard C., of Washington; Rodney, of Memphis, Tenn.; and Bernard, of Farrell, Miss. There are also two sisters, Mrs. Lucia Harris, of Louisiana, and Mrs. Rena Drury, of Mississippi.

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Intestinal Obstruction in Pregnancy—Ostmann

(*Continued from page 478*)

SUMMARY

Two similar cases of intestinal obstruction occurring in mid-pregnancy with a successful outcome have been presented. A history of previous surgery, adhesions, and involvement of the ileum occurring in mid-pregnancy is the most common sequence of events in this syndrome. Upright X-ray examination of the abdomen may be helpful in diagnosis when combined with a careful history and physical examination. Immediate surgical intervention when the diagnosis is made will prevent the progression of this condition from obstruction to strangulation and improve the prognosis for both the mother and the baby.

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New Clinical Center Studies

(*Continued from page 493*)

A limited number of patients who have undergone neurosurgery and radiotherapy will be accepted for study. Referrals of such patients will be greatly appreciated.

Physicians who wish to have their patients considered for this study may write or telephone Dr. Myron Karon, Chemotherapy Service, General Medicine Branch, National Cancer Institute, Bethesda 14, Md., Oliver 6-4000, Extension 4252.

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PROGRESS IN RESEARCH FOR MEDICINE

BOOK REVIEWS

The Encyclopedia of Sexual Behavior, Volumes I and II. Albert Ellis, Ph.D., and Albert Abarbanel, Ph.D., Editors. Price, $30.00. Pp. 1072. New York: Hawthorn Books, 1961.

Considering its importance in human life, it is astonishing that sex has been the subject of so little encyclopedic literary treatment of a scientific nature. Near the beginning of the century the first such writing appeared. This was the 7-volume work of Havelock Ellis, "Studies in the Psychology of Sex." It was soon followed by Wilhelm Stekel's 10-volume "Disorders of the Instincts and Emotions," dealing mainly with sex. In 1934 Norman Haire published a large single volume, "An Encyclopedia of Sexual Knowledge."

All of these pioneer works now lag well behind current knowledge in the field so it is not surprising that a new encyclopedic treatment of the subject should have come out this year. The new work, "The Encyclopedia of Sexual Behavior," under the editorship of Albert Ellis and Albert Abarbanel, is in 2 volumes. There are 1,072 pages, comprising 111 articles, by almost as many authorities, on the major aspects of sex behavior. The contributors include most of the outstanding professionals in their respective fields and they are from many parts of the world. All the social and behavioral sciences are represented, along with a large group from several medical specialties.

Physicians are likely to find particular interest in articles upon such topics as impotence, frigidity, autoerotism, homosexuality, contraception, abortion, eugenics, orgasm in the female, endocrinology of sex, and reports on progressive sex education in several foreign nations.

Most of the contributors do an excellent job of presenting their material with a minimum of religious or cultural bias. However, room is made for authoritative spokesmen on matters that involve serious religious and ethical controversy, so that their views may be accurately appreciated.

Coverage of important subjects is remarkably complete and up-to-the-minute. The only significant omissions noted by the reviewer are the very recent and fragmentary work in progress on the neurophysiology of sex; the equally new, incomplete but promising studies on sex in early childhood; and certain current studies of the family which bear importantly upon sex adjustment. However, all these particular studies are perhaps still too incomplete to be suitable for inclusion in a definitive work of this kind.

All things considered, these 2 volumes fully justify their title. Nowhere else in the literature on sex can so much valuable material be found in such a relatively small space. This will be appreciated by the busy medical practitioner who must seek the best information with the least waste of time. The books are carefully edited, beautifully printed, well indexed, and each article is followed by a representative and up-to-date bibliography.

Walter R. Stokes, M.D.

Lose Weight and Live. Robert P. Goldman. Drawings by Roland Rodegast. Price, $3.95. Pp. 235. Garden City, N. Y.: Doubleday, 1961.

This volume represents the confessions of a former fat man, who has now become an "ex-fat man"—Mr. Goldman. The author is well known for his many articles on medical and scientific subjects. Although he had been writing about the dangers associated with obesity, it was not until his 2 very dear, but overly fat, friends, both under 45 years of age, had heart attacks, and later his own father, also obese, was felled by a heart attack, that Mr. Goldman took stock of his own shape and decided to do something about it.

This book is no panacea for those wishing to get rid of their fat globs in 24 hours or 7 days. Mr. Goldman approached the problem of his obesity, after consulting numerous medical authorities in the field, in the only sensible way I know of to lose weight and keep it lost. This book is not for the cultist or faddist who wishes some miracle short cut to weight loss, but rather shows the reader how to eat properly and lose weight.

The chapter by Mrs. Goldman, Helping Your Husband Stay Thin, should be read by all wives who are trying to lose the fat off their husbands without losing their man.

I recommend this book highly to all physicians and to those nonprofessionals who wish to lose weight the sensible way, without miracle diets, magic formulae, special foods, pills, shots or vibrating machines.

I. Phillips Frohman, M.D.

The Question of Fertility. Translated from the French by Leah Suchodolski. Georges Valensin, M.D. Price, $4.50. Pp. 296. Garden City, N. Y.: Doubleday, 1960.

This is one of the most complete books on fertility. Artificial insemination is considered in regard to many factors. Temperature, masculinity, femininity, disease, technics, religion, and other aspects of artificial insemination are discussed.

This book is well written and humor has not been deleted. This work affords an excellent guide to gynecologists who are particularly interested in artificial insemination and sterility.

Thomas M. Leonard, M.D.

(Continued on page 30)

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Book Reviews

(*Continued from page 28*)

A Synopsis of Contemporary Psychiatry, 2nd ed. George A. Ulett, B.A., M.S., Ph.D., M.D., and D. Wells Goodrich, M.D. Price, $6.50. Pp. 309. St. Louis: Mosby, 1960.

This "small" volume, designed to be carried in the side pocket of a clinic coat, is primarily aimed at beginners in the field of psychiatry and general practitioners. Utilizing an eclectic approach, it covers a wide variety of topics, ranging through history-taking, interview technics, case studies (including physical and neurologic examinations, psychologic examinations, etc.), to various modalities of treatment. The APA standard nomenclature is reproduced intact, and a few special chapters are included on such subjects as suicide, mental health, and civilian disasters.

The writing is crisp, lucid, and readable. The material is presented in summary fashion, almost entirely free of editorial comment, and with a minimum of theoretical discussion. But in some instances this leads to confusion. The section on drug therapy, for example, presents data on more than 50 preparations. The beginner is left to pick and choose at random the preparations that seem to meet his current needs. Similarly, a summary of the work in psychosurgery with indications and reported results is presented. The statement that severe obsessional neurosis is an indication for the destructive procedure of prefrontal lobotomy appears to me to be something less than responsible presentation. In its present form the work might more appropriately have been entitled "A Synopsis of *Neuro*-Psychiatry," as it is heavily weighted along organic lines.

I found the chapters on agnosia, apraxia and aphasia, and EEG examination too complex and difficult to comprehend for a book of this type.

My chief criticism, however, concerns the material presented in the area of dynamic psychiatry. Terminology is sometimes loosely used, and even misused. "In the psychoanalytic frame of reference, constructive changes in the patients are considered due to 'transference cures,' " the authors state. This term in fact refers to so-called "cures" in which symptomatic or behavioral changes occur in response to transference feelings that are translated into action without working through, or real growth. They are considered by analysts to be brittle, unenduring, and far from a successful analytic result.

In the area of analytic theory, the authors present a picture as outdated as it is inaccurate. With the exception of a brief reference to Sullivan, theory is confined to so-called "Freudian concepts." That post-Freudian concepts and contributions (particularly in the area of Ego Psychology) are completely omitted is unpardonable; but even the presentation of Freudian concepts is incomplete. Theoretical considerations end with the pleasure-pain principle, all but overlooking dream interpretation, and omitting any reference to the repetition compulsion, 2 fundamentals of analytic theory.

There are many excellent chapters in the book, particularly those devoted to interviewing, history-taking, and clinical syndromes. The APA nomenclature and the chart summaries of current psycho-pharmacologic preparations are excellent reference sources.

The book does fill a void in the available textbook literature, and its current assets outweigh its errors sufficiently to make it a worthwhile volume for beginners in psychiatry.

I. Howard Kaiser, M.D.

Clinical Disturbances of Renal Function. Abraham G. White, M.D., F.A.C.P. Price, $10.50. Pp. 468, with 90 illustrations. Philadelphia: Saunders, 1961.

This is an authoritative review of the general scope of clinical renal diseases. Clearly written and well illustrated, it is designed for the clinician. Recognizing the key role that renal functional integrity plays in the vast majority of metabolic processes and in a wide spectrum of diseases encountered by physicians of varied interests, Dr. White has given a straightforward presentation of the role of the kidney in clinical medicine. The emphasis is well placed, except that the nephrotic and uremic syndromes are only briefly covered. With minor exceptions this is a very up-to-date review. The book, however, falls far short of the desperately needed reference textbook in the general field of nephrology.

The sections on obstetrical aspects, and particularly the one on surgical aspects of renal dysfunction, are profitable reading for those concerned. A brief survey of the common endocrinopathies and their relation to the kidney is presented. There are, also, sections on the cardiopulmonary, hepatic and neuropsychiatric aspects of renal function. The section on water and electrolyte therapy and the section on acute renal failure are rather brief.

Although lacking in many key original references, there is a good selected reference list at the end of each chapter. The book is well indexed. This book is well recommended for those physicians who wish a better understanding of how the kidney compensates for a variety of pathologically- and iatrogenically-induced deviations from normal metabolism.

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MEDICAL ANNALS
of the District of Columbia

September 1961 VOLUME XXX • NUMBER 9

Recent Trends and Developments in Psychiatric Research*

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IT IS A VERY REAL PLEASURE for me to appear before the members of my own Society in my capacity as President of the American Psychiatric Association. This is the second time that a President of the Association has been selected from among the members of this Society, the first chosen having been Dr. Winfred Overholser. I feel particularly privileged to have been given the opportunity to play some part in the affairs of our professional Association at this stage in the history of psychiatry. New knowledge and new ideas acquired during the past decade or two have provided the necessary tools for important break-throughs, and today the whole field of research related to mental health and mental illness is a complex, rapidly developing, and rapidly shifting arena of scientific endeavor. Progress has been both impressive and exciting. I should like to review with you some of the more important of the recent trends and developments in psychiatric research.

The period since about 1941 has been marked by a greatly increased awareness of the interrelationship of psychologic, constitutional, and environmental influences upon behavior. It is well established now that influences in the psychologic realm affect physiologic functioning; that the reverse is true; and that the whole set of interactions occur in a social interpersonal setting that influences both psychologic and physiologic events. These advances in knowledge have affected the conceptual systems of scientists and as a consequence the therapeutic methods of the clinicians. The real effort of scientists today in the study of man is directed toward comprehending the transactions among all of these areas. Advances are being made and new knowledge is being brought to light in the biologic, psychologic, and social areas.

Among the biologic advances are several important primary findings related to the functional organization of the brain. The development by Penfield, and the elaboration by Baldwin and others, of technic for stimulating the exposed human cortex has laid the groundwork for the study of brain function in relation to subjective experience. Studies by Olds and others (Milner, Brady, Lilly) revealing that an animal will perform work for the privilege of receiving brain stimulation in certain brain loci, or of avoiding such stimulation in other loci, lend support to the hypothesis that specific brain systems are involved in motivation. It has been demonstrated (by Andersson, Olds, Miller, and others) that discrete areas of the brain can be activated electrically or, in some cases, chemically, to elicit behavior that is directed to the satisfaction of specific appetites. Moreover, the drives so generated can be used to shape behavior, leading the animal to resourceful exploitation of its other intellectual and physical resources in order to attain specific goals. Comparisons have revealed that certain drives induced by such central stimulation may be stronger even than the traditional hunger, thirst, and sex drives.

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* Read before the Washington Psychiatric Society in Washington, D. C., March 17, 1961.

These studies on central reward mechanisms have now been extended (by Olds) to the injection of chemical agents and hormones into the brains of animals. Data from these studies show that the injection of certain compounds in very small quantities into specific localized regions of the brain modify behavior in systematic and predictable ways. The injection of control solutions in the same locations or the same compounds injected elsewhere do not have such effects. This would appear to open a whole avenue of new correlations between neurochemistry, neurophysiology, and behavior.

Recent years have seen the dramatic and significant discovery of a number of neurochemical substances that appear to play major roles in the activity of various neurones and the transmission of nerve impulses. Acetylcholine, serotonin, epinephrine, norepinephrine, histamine and gamma-aminobutyric acid are a few examples. The enzyme systems responsible for synthesizing and destroying these substances are now better, but far from perfectly understood. The principal pathways through which the substances are metabolized are under detailed investigation in many laboratories, and the distribution of the substances and their related enzymes in various parts of the brain and nervous system is being determined. One finding in this area (Roberts) is that gamma-aminobutyric acid inhibits electrical activity in the central nervous system. This substance apparently is localized only in the central nervous system and may either itself be, or be closely related to, a chemical mediator of inhibitory function in the central nervous system.

Another group of important biologic advances is related to the definition of the limbic system and rhinencephalon in anatomic and functional terms and demonstration of the control that the limbic system, the basal ganglia, the brain stem, and the hypothalamus exercise over the emotions and visceral behavior (Papez, Kluver, Hess, Fulton, MacLean, Jasper, Magoun, Gellhorn). Other investigators have demonstrated control of pituitary activity by the hypothalamus and the role of both the hypothalamus and the brain stem in direct neurosecretory activity (Long, Harris, Scharrer, Sawyer, Hume, Vogt).

Until a few years ago it had been supposed that nerve cells transmitted impulses on an "all or none" basis. It was believed that a stimulus either yielded a standard nerve response or no response at all. Several neurophysiologists, working independently of one another, determined that "graded responses" occur at both the receiving and the transmitting ends of the nerve cell (Eccles, Bishop, Kuffler, Marshall, Frank). These responses are local and cumulative, accurately "grading" incoming stimuli into "all or none" impulses for long-distance transmission. The importance of this discovery lies in the fact that, as we know, it is the neural endings containing the graded response mechanisms which are likely the seat of our most complex mental activity and which are definitely areas most importantly affected by drugs. A great deal of cerebral and neural activity, too complicated to be explained by the "all or none" theory of transmittal, can be much more clearly understood in the light of this new insight into a basic neurophysiologic mechanism.

A whole new area of investigation and an extremely fascinating one deals with the necessity for a continuous flow of information from the outside world in order to maintain normal mental processes. One study has gathered evidence indicating that the visual centers of the brain show more electric activity during sleep than during waking states (Evarts). These data suggest that sleep is associated with an alteration of the pattern of cerebral activity rather than with the absence of activity in the brain. The findings of this study are in agreement with previous theories that the coördinated brain activity required for normal waking behavior is partially dependent upon continuous inflow of controlling (or inhibitory) impulses to the sensory mechanisms of the brain. Sensory deprivation studies (Hebb, etc.) have demonstrated the dependence of the brain on continuing afferent input for adequate functioning.

Other recent research advances have helped establish relations between physiologic and psychologic processes. It has been demonstrated that temporal lobe ablations in monkeys, chimpanzees, and man lead to behavioral alteration in the sphere of mentation and personality structure (Kluver, Bucy, Pribram, Rosvold, Mishkin, Penfield, Baldwin). Bilateral removal of the amygdaloid nucleus abolishes typical anger and fear reactions in normally aggressive and intractable monkeys (Bucy, Kluver). Ablations of frontal lobe structures in monkeys, chimpanzees, and man similarly lead to psychologic defects. Individuals have a flattened affect, are less capable of dealing with abstract problems, are less able to generalize, and are less able to perform delayed responses. Inability to perform delayed responses seems to arise from perseveration and inhibition loss rather than from memory loss (Jacobsen, Fulton, Moniz, Freeman, Watts, Solomon, Rosvold, Mishkin, etc.). Variations of these ablations lead to variation in the psychologic deficits elicited (Grantham, Pool, K. E. Livingston, etc.).

It has been possible to induce chronic "psychosomatic" disorders such as peptic ulcers and intestinal bleeding in experimental animals by electric stimulation of the hypothalamus. We now know that similar disorders can be induced in animals required to make difficult decisions in order to avoid shock. It is extremely significant that control animals in the same situation of restraint and given the same shock but not obliged to make decisions do not develop physiologic disorders (Walter Reed research group). One psychophysiologist (Curt Richter) has shown that animals subjected to relatively short duration of severe emotional or physical stress show abrupt changes in relation to feeding, sleep, physical activity, and other pervading features of life which may last indefinitely. He has been able to make animals as dramatically obese as if they had had hypothalamic lesions. Both psychologists and psychiatrists have also made important contributions in the field of experimental psychopathology. Production of experimental neurosis in lower animals (Masserman, Liddell) has demonstrated the relationship between neurotic behavior and disordered experience and has provided a research tool for the study of model neuroses. The work on stress by other researchers has opened a window on the specific body organ effects of emotional conflicts (Alexander, Selye).

Recent years have brought significant research advances related to brain nutrition and metabolism and to biophysiologic and biochemical properties in health and disease. The development (Kety, Schmidt, Sokoloff, etc.) of the nitrous oxide technic for determining cerebral blood flow and oxygen consumption in animals and man has provided a valuable biologic tool that has been applied to a wide variety of clinical problems. Normal mechanisms and quantitative relations have been established. Measurements have revealed the effects of anxiety and other emotional stress, of age, of many disease and physiologic states, and of various drugs.

The discovery of the psychologic effects of lysergic acid diethylamide (Hofmann) has provided an important stimulus to the field of psychopharmacology. LSD has been used as an important research tool in experimental psychiatry, neurophysiology, and neuropharmacology. The finding of a specific effect of LSD on the lateral geniculate nucleus (Evarts, Marshall) represents the first discovery of a localized and specific effect of a visual hallucinogen on a part of the visual system. The demonstration of the presence of serotonin in the brain and the discovery (Gaddum) of antagonism between LSD and serotonin have directed scientific interest toward the role of serotonin in the central nervous system.

Of key significance has been the discovery of the metabolic pathway in man for the catecholamines, epinephrine and norepinephrine. It has been demonstrated (Axelrod) that these important hormones are metabolized by o-methylation. More recent findings now make it possible to account for the fate of practically all epinephrine in the human body. These new studies provide a clearer picture of metabolic processes affecting the functioning of the nervous system and bodily responses to stress. Other metabolic studies have revealed the biochemical mechanisms of disorders, such as phenylketonuria and to a limited extent galactosemia, which lead to severe mental retardation (Kaufman, Kalckar). These studies are but the beginning of a new field of work which should eventually show how metabolic systems affect brain development and mental processes.

The genetic chemicals, ribonucleic acid (RNA) and desoxyribonucleic acid (DNA), have been the subject of much recent investigation. DNA, chiefly present in the nucleus of cells, appears to play a crucial role in passing genetic information on from generation to generation. RNA, chiefly found in the cytoplasm of cells, appears to have a fundamental part in the synthesis of protein. Since for both of these related substances the communication of chemical information seems to be a central function, an understanding of their structure and the way this structure operates to pass on information is essential. The use of synthetic polynucleotides and other technics is bringing us closer to a full understanding of the way these basic substances of life carry genetic information and dictate the patterns of protein synthesis. These discoveries help elucidate, at the most basic level, the functioning of the nervous system as well as of all living matter.

The new psychoactive drugs are also being used as powerful research tools. One of their greatest values will ultimately lie in the insights they can give us into normal brain function. Interesting leads have come from research in reserpine and iproniazid, to cite just two examples. Serotonin and norepinephrine occur naturally in the brain. Reserpine decreases the level of both serotonin and norepinephrine in the brain, probably by increasing their availability for metabolism, at the same time making a person tranquil and quiet. Iproniazid, on the other hand, causes serotonin and norepinephrine to accumulate in the brain, probably by delaying metabolism; sometimes it relieves depression and sometimes it produces psychotic excitements. But it is still unclear whether or not the effect of these drugs on the amount of serotonin and norepinephrine in the brain is directly and unequivocally related to the changes in behavior produced by the drugs.

The vast unanswered question still remains: What are the ties between all these complex chemical processes and the equally complex congeries of the mental illness? One method of attacking this problem has been the search for possible psychotoxic substances that may occur in the blood of patients suffering from mental illness. If there is some biochemical derangement in these patients, a careful analysis of their bodily fluids and a comparison of these fluids with those of normal people may point the way to the source of the mental illness. It is extremely difficult, however, to determine whether a certain chemical substance is related to the cause or is a by-product of a mental disease. Also, many extraneous factors, such as diet and incidence of infectious diseases, may account for observed differences in biochemical substances and reactions between normal persons and mental patients. The past few years have seen the uncovering of a number of promising leads linking schizophrenia to faulty metabolism and to one or another chemical substance. In the case of some of these substances, other investigators have been unable to replicate the findings. In the case of other substances it has been found that the biochemical differences resulted from factors other than the presence of mental illness. Some leads need more study and are still "open."

The psychologic advances related to mental health during the past two decades have been rooted in the new directions which the field of psychology itself has taken. As a discipline, psychology has moved away from the measurement of single traits toward life-oriented and science-oriented propositions involving emphasis on, and integration of biology and sociology. The experimental method in psychology now includes the use of both survey and clinical technics.

Among the more noteworthy advances is the increased knowledge we now have about the bases of motivation, including the discovery of specific stimulus-bound innate responses governing instinctive behavior in lower animals (Lorenz, Tinbergen). Demonstration of the importance of the "imprinting" process and of the plasticity of the central nervous system in both animals and man during critical phases of early development has resulted in much reëxamination of the notion of instinctive behavior. Evidence has been established for the existence of a curiosity or exploratory drive as an instinct which can displace such theoretically stronger drives as hunger, thirst, and fear (Harlow, N. Miller). Studies of operant registration of autogenic responses (Skinner) have added a new dimension to the ordinary subject matter of stimulus-response psychology.

Highly significant so far as the field of mental health is concerned have been the series of developmental studies initiated and carried out during recent years by psychologists all over the world. These include analyses of child-rearing practices (Sears), which have concentrated on ways in which information about child care and development is communicated to parents, consequences of misinformation, and needs and methods for child-care instruction. Other investigators (Bell, Schaefer) have developed devices for measuring mother-child interaction and for assessing the effects of such interaction on the personality development of children. These and similar diagnostic tools are being used in broad programs designed to study normal child development and parent-child interactions for the purpose of developing knowledge which can be used in preventive mental health programs. Investigators are studying interactions between genetic and environmental factors in early behavior development, as well as the nature of learning in the early stages of human development (Rheingold, etc.). A principal focus of this work is on drives and reaction tendencies of normal infants, such as curiosity and the need for visual and other stimulation, and the relation of these drives to learning and personality development. Psychologists, who have been making longitudinal studies of age changes and intellectual ability, have found that children's IQ's change over time, and that these changes are related to personality variables (Fels Research Institute). Other longitudinal studies have demonstrated human capacity for intellectual growth and learning well into middle age (Bayley).

Research on elderly people (Birren, etc.) has demonstrated the role of the nervous system as a pacemaker in the aging process. We are constantly learning more about the process of aging as a part of human development and about the characteristics which are attributable to normal and abnormal aspects of this process. In one study (at NIMH) it was found that healthy older men are not very different from healthy younger men, and that illness rather than age often accounts for the typical picture one has of a group of older individuals. When the group being observed was divided into a subgroup who were healthy and another subgroup with subclinical conditions like mild hypertension, certain psychologic differences were noted that could be related to the level of physiologic function. However, both subgroups differed significantly from younger men on certain psychologic measurements. It appears that although health alone seems to be a factor in the physiologic differences between young and old, normal aging as well as health is important in psychologic differences between the two age groups. Psychologic factors, however, also have an effect on physiologic functions. For example, those older men who were functioning less well in their social environment and who found leisure time and retirement oppressive had lower than normal cerebral blood flow and cerebral oxygen consumption. Mental illnesses in the elderly, such as depressions, often are no different than those in younger people. The frequent disinclination to treat older people psychotherapeutically is not always scientifically tenable.

A significant aspect of all of these studies is the new emphasis on a continuum of development from infancy to old age, which opens the door to concentration on mental health per se. We now have a conceptual framework within which to study the processes of normal human development and the factors contributing to or interfering with that development. Eventually, this should enable us to amass a body of data which will make possible utilization of specific technics for the promotion of mental health on a rational basis.

In the area of psychotherapy and the psychosocial bases of mental illness there have been equally significant developments. In addition to the outstanding progress that has been made in recent years in the broadening of psychiatric theory and the development of individual therapies, there has been greater interest in, and concentration on the objective study of the psychotherapeutic process itself (Saslow, Rogers, Robbins, Shakow, etc.). Attempts are being made to elucidate the forces that operate in different types of psychotherapy in order to accelerate and improve treatment. Both organic and social dynamics are being given consideration, particularly in analyzing the relative affects of drug therapy and improved milieu treatment (Elkes, etc.).

Another particularly rich area of investigation during the past few years has been the effect of family relations on the production and course of mental illness (Ackerman, Lidz, Spiegel, Wynne, Jackson, Bowen, etc.). Although the role of the family in the production of abnormal behavior has long been recognized, it is only recently that intensive study of families of schizophrenics has been undertaken and that organized technics for family therapy have been developed.

One group of investigators (Wynne and colleagues), who have been studying the effects of family culture on the development of children's patterns of thinking, have demonstrated the feasibility of predicting personality characteristics of a child by examining the responses to projective tests made by other members of his family. Using the Rorschach test, the TAT, the Draw-a-Person test, the Sentence Completion test, and the MMPI, these investigators have been able to make accurate diagnostic predictions about particular children by analyzing the test reactions of their siblings and parents. It has been possible, for example, to predict, in a statistically significant number of cases, whether a given child would or would not be found to be schizophrenic on the basis of projective tests administered to other members of his family, none of whom were schizophrenic. It has also been possible by means of the same technics to "blind"-match child with family in a group of families, some of which have a schizophrenic child and some of which do not, as well as in a group of families in which each family has a schizophrenic child.

In a study of families of schizophrenic patients (Lidz at Yale) not one of the patients' families was reasonably well integrated. The mother's attitude toward the child generally reflected her attitude toward the marriage, and all of the marriages were gravely disturbed. They were either torn by conflict or distorted by the necessity of one spouse passively to accept the pathologic behavior of the other. Sixty per cent of the patients had at least 1 parent who was a schizophrenic, a borderline schizophrenic, or a paranoid. These parents surrounded the growing children with unreal concepts of life, and thus, when faced with conflict themselves, the children came to terms with life by misperceiving and distorting it.

In another study of the families of schizophrenics (at Palo Alto, California) the investigator has reported that the parents tend to make their children extremely dependent upon them and at the same time deny that the dependent responses are appropriate. Indeed, these parents threaten withdrawal of support if the child even tries to point out that the dependency exists.

Other investigations (at NIMH) suggest that family structures which assign rigidly defined patterns of behavior (or social roles) to their members may precipitate psychotic behavior. This can occur when the family imposes upon the individual a role which he cannot maintain and which denies him opportunities to experiment with other roles as a way of developing individuality within the family unit. This denial of freedom to experiment with other roles may reflect severe anxiety within the family, and any deviation from the expected role may be resisted because of the anxiety-producing effects of such deviation (hence, resistance to improvement in the ill member of the family).

In an allied area, recent sociologic studies have concentrated on the effects of family attitudes on the rehabilitation of hospitalized mental patients (Clausen, Kohn). These studies have given us increased understanding of the need for social therapy and the kinds of problems that must be overcome in order to rehabilitate the mental patient. The social sciences, as well as the biologic and psychologic sciences, have contributed an impressive body of new data to the field of mental health in the last few years. The concern of the sociologist with how social relations and cultural expectations affect mental health reflects a growing trend, to search more deeply in the total environment for causes and manifestations of mental illnesses.

Epidemiologic studies have revealed relationships between social class and different types of mental illness, more particularly between social class and kinds of treatment sought by and provided to mentally ill persons (Hollingshead, Redlich, Clausen, Kohn). At the other end of the health-illness continuum, studies on social-class differences in parental attitudes toward child-rearing, in role relationships of parents and children, and in parental expectations of children are contributing important new knowledge about social variables in normal child development (Kohn, Yarrow, Clausen, etc.). Such new information is vital for the development of positive mental health programs which will take into consideration all of the needs of the various segments of a given community.

Important advances have been made in the use of sociologic variables in treating mental and emotional disorders. All of these are very familiar to you, so I will do no more than list them. I refer in this category to the change in the role of the mental hospital from a custodial institution to a therapeutic community and the development of new methods of mental hospital administration designed to promote treatment and rehabilitation. I refer also to the open hospital, the day hospital, the night hospital, the half-way house, the sheltered workshop, and all of the other new improvements in handling the mentally ill. I include also in this category the increased trend toward treating mental patients in psychiatric wards of general hospitals, the trend toward smaller mental hospitals, toward voluntary admission, and toward treatment in the community. For example, one state hospital is experimenting with a combination of treatment at home and on a hospital ward for patients with acute psychoses. Other hospitals, looking toward discharge of the patient, are attempting to develop community planning for patients on trial visit, effective family care methods, and better ways of rehabilitating the chronic psychoneurotic patient. Still other large hospitals are experimenting with the establishment of smaller units in which a "therapeutic community" can be developed. This is an extremely important development and marks a transition toward the smaller mental hospital of the future.

Another important study on mental health development in sparsely populated areas is being conducted in a western state where great distances, sparse population, and extreme dearth of trained mental health workers conspire to deprive whole communities of needed mental health services. It is concentrated on the feasibility of providing such services on a regional multi-county basis, drawing on nonpsychiatric resources such as physicians, public health nurses, welfare workers, and teachers to supplement the work of the psychiatric agencies. Approximately one-third of the area of the United States has the same geographical and population characteristics as this state, and the people in this huge area literally have little or no means of getting psychiatric help short of commitment to a state hospital far from home. If the experimental method of providing mental health services should prove efficient and useful, it could be of tremendous importance in helping to cope with one of the most serious mental health problems in the country.

We must also include, under the rubric of sociologic advances in treatment, the experimental development of emergency psychiatric treatment centers, suicide prevention centers, and many other important and ground-breaking experiments designed to treat as many patients as possible within the community and to return hospitalized patients to the community as rapidly as possible. Through the utilization of the newer technics, including pharmacotherapy, it has been possible to reduce the rate of readmissions of patients discharged from inpatient psychiatric facilities. Chronically ill people, who formerly would have to be kept in state hospitals for long-term care, are now able to be maintained in the community.

Preventive programs have also been influenced by the new sociologic approach in the field of mental health. Increased understanding of social forces in the community and the varying needs of different segments of the population have brought us to the realization that no preventive program can be effective unless it is a totally coördinated community program. This understanding has led to attempts to develop broad-based community mental health centers which will provide diagnostic, referral, treatment, and preventive services, and which will pave the way for integrated psychologic and social treatment that takes into consideration all of the needs of the individual as a total human being functioning in society rather than as a collection of disparate problems.

We are, in a sense, beginning to organize the forces of society for dealing with mental illness at various levels, so that illness can be arrested as early as possible and healthy development promoted to the fullest extent. The fact that we are about to begin to do this is, I think, the result not only of new sociologic understanding but of the combined force of all the new knowledge that has been contributed from all the relevant disciplines during the past decade or two. We are just beginning to acquire sufficient knowledge so that we can begin to see a total pattern. Drawing an analogy from a jigsaw puzzle, we can see that, though many of the pieces are still missing, we are beginning to have some idea about the general nature of the picture that will finally emerge. What is more

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Experiences with Diphoxazide, a New Anticonvulsant Drug

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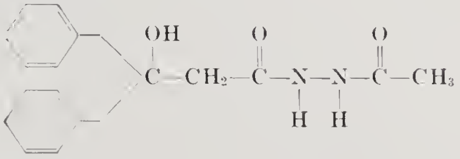
THE DRUGS CURRENTLY USED in the treatment of convulsive disorders carry with their use the discomfort of mild untoward affects, such as drowsiness, gastric upset or skin rash, or the danger of more serious complications, such as severe ataxia, liver or bone-marrow disease severe enough at times to cause fatalities. This fact has motivated a constant search for new medications which would be either as effective or at least capable of being used as adjunctive therapy to reduce the dangers associated with side-effects from large doses of standard drugs.

Since the introduction of Dilantin in 1938[1] and particularly since 1950 there have been a great number of experimental anticonvulsant drugs exhaustively tested first in animals and then submitted for clinical trials in humans. All physicians are aware of the need for drugs offering better seizure control. These drugs should have less toxic side-effects if possible. However, the amount of side-effects acceptable depends on the efficiency of the drug in its primary function.

In view of this need for drugs as substitutes for, or adjuncts to Dilantin, Mesantoin or Mysoline in the therapy of grand mal and psychomotor seizures, we have investigated a new drug which has shown promise in bio-assay, in that it was very effective in controlling electrically-induced seizures in animals.

MATERIAL AND METHODS

The new preparation is a white crystalline solid and has the formula $C_{17}H_8N_2O_3$, and the structure is:



It is prepared under the name of Diphoxazide.*

The LD_{50} PO in animals is from 250 mg./K in dogs to over 3,000 mg./K, as determined in rats. The effective range of intraperitoneal injection against electroshock was 23 mg./K, with side-effects such as ataxia and sedation produced at dosage in the range of 105 mg./K, or about 5 times greater than the therapeutic range.[2]

The highest dosage given in humans was 12 mg./K. This was without evidence of toxicity or side-effects. The average dosage of Diphoxazide in humans was established at 300 mg./day with a minimum effective dosage of 25 mg./day and a maximum of 800 mg./day. Since the drug was available in the oral form only, the possibility of testing it in status epilepticus was eliminated.

Over a period of a year and a half a total of

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* Supplied by Merck Sharp & Dohme Laboratories, West Point, Pennsylvania.

22 patients received the medication and were followed for varying lengths of time, the mean time being 6.2 months. The patients were used as their own controls since the double-blind method could not be justified in a trial of anticonvulsants. For the first year patients were selected who were poorly controlled on established adequate anticonvulsant therapy and/or showed toxic or untoward reaction to their drug régime. At the end of a year and with more confidence in the drug we began to use Diphoxazide alone on new patients.

Diphoxazide was added to the current drug régime and increased in dosage until seizures were brought under control or untoward reactions occurred. If the seizures were brought under control it was the policy to slowly eliminate the other drugs until the patient was on Diphoxazide alone. This group of patients, who for various reasons have been considered therapeutic failures in the past, represents a poor group to use in evaluating the effectiveness of a new drug. However, they were considered adequate to establish dosage and toxicity studies. The patients were followed by the Epilepsy Clinic, Georgetown University Hospital, where they were evaluated clinically and with laboratory studies at weekly intervals for 6 weeks, 2-week intervals for 1 month, and then on a monthly basis. Laboratory examinations consisted of blood count, urinalysis, alkaline phosphatase, and others as indicated.

RESULTS

The patients were divided into 4 groups: (1) good control (G), in which seizures were reduced from 75 to 100 per cent; (2) fair control (F), in which seizures were reduced by 35 to 75 per cent; (3) poor control (P), in which seizures were reduced by 35 per cent or less, and (4) terminated (T) because of toxicity, pregnancy or other reasons. In the last group there were 6 patients, 4 of whom were eliminated from the study because of follow-up difficulties or pregnancy. The other 2 showed toxic reaction, which necessitated stopping the drug. These remain as a part of the total of 18 patients in the study. Five patients were brought under good control and 4 patients were brought under fair control, while 7 of the patients were not helped and 2 became toxic. The drug was therefore helpful to some extent in only 50 per cent of the patients.

Table 1 outlines the results of Diphoxazide therapy in relation to seizure type. The number of petit mal patients treated was insufficient to warrant any conclusion, but it would not be expected that drugs which were effective in the electrically-induced seizures would be effective in the Metrazol-sensitive type. It appears that the drug best controls psychomotor seizures alone and next psychomotor seizures associated with grand mal seizures. It did not change the frequency pattern of grand mal seizures even when they were associated with psychomotor seizures.

TABLE 1

Results of Diphoxazide Therapy Related to Type of Seizure

	Grand Mal		Psychomotor		Grand Mal plus Psychomotor		Grand Mal plus Petit Mal Triad		Total
	D+	D	D+	D	D+	D	D+	D	
Good results	0	0	4	0	1	0			5
Fair results	2	0	2	0	1	0			5
Poor results	4	0	2	0					6
Toxic or other reasons	2*	3					1	0	6
TOTALS	8	3	8	0	2	0	1	0	22

* Stopped because of pregnancy

LEGEND:

D+—Diphoxazide plus other anticonvulsants

D—Diphoxazide alone

Figure 1 demonstrates the results of therapy in relation to the etiology of seizures. The best results were observed in patients with symptomatic seizures and a history suggesting head trauma without clinical findings other than an abnormal electroencephalogram. There were 2 patients with obvious evidence of brain damage. One developed a toxic reaction; the other appeared to be improved as far as seizure was concerned, but he stopped the drug voluntarily because he felt it was affecting his "nerves."

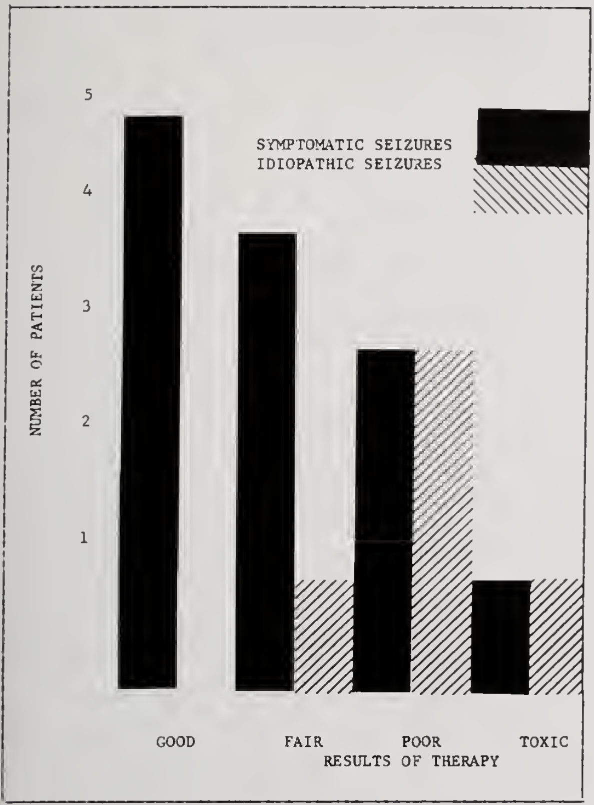

FIG. 1. Results of Diphoxazide as to etiology of seizures.

Table 2 lists the undesirable and toxic reactions in the study. True toxic reactions were noted in only 2 patients, both children (ages 8 and 16). Repeated blood counts, urinalyses, and alkaline phosphatase tests were performed. A frequent finding (in 8 patients) was an elevated alkaline phosphatase, either transient or constant, which always returned to normal when the drug was discontinued. A battery of liver function tests including bromsulfalein, thymol turbidity, cephalin flocculation, total protein, A/G ratio, and transaminase were performed on patients with elevated alkaline phosphatase. These tests revealed no evidence of impaired liver function in any of the patients. Albuminuria occurred in 1 patient and a maculopapular rash in another, both quickly subsiding when Diphoxazide was discontinued.

SUMMARY

The evaluation of a new anticonvulsant drug, Diphoxazide, was conducted over a period of 18 months. Twenty-two patients were included in the study. The average dosage was 100 mg. 3 times a day, with the largest 800 mg./day. The best results were in the psychomotor seizures either alone or with grand mal. Five patients were well controlled by adding Diphoxazide to their established therapy. Four patients were helped by the drug, making a total of 50 per cent of the patients receiving benefit. Seven patients were unaffected by adding Diphoxazide to their drug régime, and 2 patients developed toxic reactions, making a total of 50 per cent of the patients receiving no benefit from the drug. Four patients, or 18 per cent of the total, could not be evaluated because of insufficient follow-up and pregnancy.

TABLE 2

Toxicity

	Untoward Reaction Not Requiring Stopping Drug		Toxic Reaction Requiring Stopping Drug		Total
	D+	D	D+	D	
With allergic history or other drug idiosyncrasy	2	0	1	0	3
Without allergic history			1		1
Elevated alkaline phosphatase	4	0		0	4
TOTALS	6		2		8

LEGEND:
D+—Diphoxazide plus other anticonvulsants
D—Diphoxazide alone

It was concluded from the study that Diphoxazide is of limited value as an anticonvulsant, compares poorly with Dilantin, Mesantoin or Mysoline, and that its use would be restricted to those patients in whom standard preparations fail, particularly in the psychomotor type of seizure.

(*Continued on page 567*)

Some Observations on the So-called Older Antibiotics and Their Clinical Application*

Part I. Penicillin and Streptomycin

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WITH THE EVER-INCREASED number of available antibiotics of varied therapeutic and toxic effect, and the vigorous sales campaigns designed to promote one's use of individual agents to the exclusion of others, it is not difficult to gain the misimpression that the older antibiotics are also outmoded. The following is a somewhat rambling apologia, designed to dispute such an unwise conclusion. Included are addenda having to do with the application of these and other agents, their side-effects, and some clinical vagaries of the diseases in which they are used.

THE PENICILLINS

Penicillins G, O and V[1] of the naturally occurring penicillins have been produced commercially; in the recent past phenethicillin potassium (alpha-phenoxyethyl penicillin potassium),[2] a semisynthetic penicillin, has been prepared for oral use. Still more recently, another semisynthetic penicillin, sodium dimethoxyphenyl penicillin,[3] which retains its antibacterial activity in the presence of penicillinase and hence is effective against staphylococci resistant to other penicillins, has been marketed. It must be administered parenterally.

Penicillin G, and in selected cases penicillin V, are most commonly employed against pneumococcal, gonococcal and streptococcal infections. Penicillin G is preferred in meningococcic and syphilitic infections.[4] Certain other bacterial infections best treated with the penicillins, including those staphylococcal infections to be treated with dimethoxyphenyl penicillin sodium (staphcillin), will be referred to later.

When rapid effect or high serum concentrations of penicillin are sought, one uses aqueous crystalline penicillin G. As examples, it is given intramuscularly in amounts of 1,000,000 units every 2 hours in meningococcal meningitis, or by continuous intravenous drip in amounts of 20,000,000 to 100,000,000 units daily in enterococcal endocarditis.

When a longer-acting preparation is desired, procaine penicillin G is used. In pneumococcal pneumonia, for example, it is given intramuscularly once or twice daily in amounts of 300,000 to 1,000,000 units.

Benzathine penicillin G, in amounts of 600,000 to 1,200,000 units given intramuscularly, is used for the prophylaxis of rheumatic fever or glomerulonephritis, in which reinfection by beta-hemolytic streptococci is undesirable. It may be well to recall here that, theoretically at least, any beta-hemolytic streptococcus can precipitate rheumatic fever in a susceptible person, but that only certain specific strains of beta-hemolytic streptococci can initiate the reaction of glomerulonephritis. Benzathine penicillin G is said to persist in the body up to 4 weeks.

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* This article is being published in 2 parts, of which this is Part I. Part II will appear in the October issue of the MEDICAL ANNALS.

EDITOR'S NOTE: It may be of local interest to note that the author graduated from the Georgetown University School of Medicine in 1943 and served a fellowship in internal medicine at the Georgetown University Hospital.

Penicillin O has been recommended for use in people allergic to penicillin G, but its use does not insure against untoward reaction.

In 1955, members of our group showed that European workers were correct in their assertions that, after oral administration, concentrations of penicillin V in the blood exceeded those following similar oral doses of penicillin G, and that penicillin V was effective in certain clinical infections.[1] Two hundred thousand units of penicillin V given orally at 4-hour intervals has been a satisfactory dose in the treatment of minor infections. In more severely ill patients, doses of 10,000,000 or more units have been given per day with success. Initially it seemed that phenethicillin potassium might supplant penicillin V since it provided higher concentrations in the blood. However, we have published data[2] that corroborate those of Griffith[5] and McCarthy and co-workers,[6] indicating that there is, weight for weight, no difference in the antibacterial effects of the drugs. In other words, while the semisynthetic penicillin provides higher blood levels, its ability to kill susceptible organisms, as indicated by the so-called serum bactericidal test,[4-11] is not comparatively enhanced. Therefore, in infections in which oral administration of penicillin is employed, one may use penicillin V and the newer semisynthetic penicillin interchangeably. This makes evident that an apparent advantage provided by a chemical change in an agent may be accompanied by disadvantages that are not immediately evident. The unexpected ill effects of furaltadone (Altafur) on the central nervous system, possible hepatotoxicity due to the propionyl ester of erythromycin, and the photosensitizing capacity of demethylchlortetracycline (Declomycin) are other examples of undesirable effects that may accompany a chemical change in an antibacterial agent that initially appeared to represent a more desirable product.

Penicillin has a chemical structure so complex that for nearly 15 years it eluded identification. Investigation ultimately revealed that all natural penicillins have the same central core, namely, a ring composed of 7 atoms of carbon, 12 of hydrogen, 3 of oxygen, 2 of nitrogen, and 1 of sulfur. Chemically this core is known as 6-APA (6-aminopenicillanic acid); differences between natural penicillins depend on the nature of side chains attached to the core. An important discovery was that the mold that produces penicillin produces the core before attachment of the side chain. It was discovered also how to inhibit attachment of the side chains, thus stopping the mold's production at the point where it produced only the unattached core. Until these data were available, penicillin could be produced only through biologic (fermentation) methods, but by using 6-aminopenicillanic acid, the penicillin chemical intermediate produced by fermentation, it became possible to synthesize other new penicillins. The first commercial example of this abillty was the release of phenethicillin potassium, produced by the N-acylation of alpha-phenoxypropionic acid (the phenyl ether of lactic acid) and 6-aminopenicillanic acid.

The search leading to the semisynthetic dimethoxyphenyl penicillin sodium (staphcillin) was for a side chain which, if added to the core of the penicillin molecule, would produce a bactericidal agent, but one which was not destroyed by penicillinase. More than 500 artificial penicillins were made by attaching various side chains to the penicillin core, before dimethoxyphenyl penicillin sodium was created. It, like phenethicillin potassium, probably is only a bellwether of new semisynthetic penicillins having possible clinical application. While it retains its antibacterial activity in the presence of penicillinase, which inactivates penicillins G, V and O, one can induce in vitro resistance to the agent, indicating that different mechanisms of penicillin resistance by bacteria are possible. Dimethoxyphenyl penicillin sodium is given intramuscularly, in amounts of 1 Gm. every 4 to 6 hours; for intravenous use it is recommended that 1 Gm. be given every 6 hours.

When susceptibility tests indicate that a staphylococcus resists penicillins G and V but is sensitive to dimethoxyphenyl penicillin sodium and to other antibacterial agents, selection of the pertinent agent depends on (1) the nature of the infection and the need for a bactericidal effect, and (2) considerations of comparative toxicity and convenience of administration. Using these criteria, one may roughly divide staphylococcal infections into 3 groups in attempting to indicate the clinical potential of the agent.

In the first group, wherein the clinical potential of dimethoxyphenyl penicillin sodium is probable, the sole entity is staphylococcal bacterial endocarditis. In staphylococcal bacterial endocarditis resistant to other penicillins, dimethoxyphenyl penicillin sodium deserves thorough investigation, since it appears to be less toxic than other bactericidal agents such as vancomycin, kanamycin and ristocetin. It is generally accepted that eradication of staphylococcal bacterial endocarditis requires use of agents capable of bactericidal effect. Also, use of dimethoxyphenyl penicillin sodium would be less cumbersome than combined therapy with the so-called bacteriostatic agents such as erythromycin,[7-12] novobiocin,[13] and chloramphenicol, which are generally considered to be ineffective when used alone in bacterial endocarditis, together with such bactericidal agents as bacitracin and kanamycin (or neomycin). However, proof that use of dimethoxyphenyl penicillin sodium is as effective as these alternate regimens awaits future experience. This drug might qualify as an effective agent in bacterial endocarditis since it is bactericidal, but one should recall that it is less bactericidal, weight for weight, than penicillin G. Also, the doses recommended for dimethoxyphenyl penicillin sodium are considerably smaller than those that have been employed in therapy with penicillin G. Another possibility in the use of dimethoxyphenyl penicillin sodium which might be explored is its incorporation in combined therapy; in this regard, bacitracin, which has been said to enhance the effect of penicillin G, comes to mind. Bacitracin does not appear to be excessively toxic if one administers it in 4 divided intramuscular injections and gives no more than 100,000 units daily.

In the second group of staphylococcal infections wherein the clinical potential of dimethoxyphenyl penicillin sodium is possible are included such diseases as bacteremia, meningitis, pneumonia, internal abscesses, peritonitis, mastoiditis, bacterial arthritis, and selected severe urinary infections. If one accepts bacteremia as exemplifying this group, it is seen that the need for an agent with the potential of dimethoxyphenyl penicillin sodium is not so great in this group as in bacterial endocarditis. This is so because erythromycin and novobiocin have been effective in staphylococcal bacteremia; since these agents have been about as effective as penicillin G, it will be welcome but surprising if dimethoxyphenyl penicillin sodium proves more effective. Since erythromycin and novobiocin can be given orally and are less toxic than dimethoxyphenyl penicillin sodium, and since one wishes to minimize the use of dimethoxyphenyl penicillin sodium so as to minimize staphylococcal resistance to it, there are several reasons why this drug is not automatically the agent of choice in these infections. If time proves dimethoxyphenyl penicillin sodium much superior to erythromycin and novobiocin in these infections, it will be indicated when the causative staphylococci have been shown to be resistant to other penicillins. However, if time proves the converse, then erythromycin and novobiocin will continue to warrant precedence. In either event it seems reasonable to use dimethoxyphenyl penicillin sodium before considering the use of more toxic agents such as vancomycin,[14] kanamycin, chloramphenicol, ristocetin,[15] or combined therapy as outlined above, in about that order of choice. There is no gross objection to the giving of dimethoxyphenyl penicillin sodium when cultures indicate a staphylococcus to be causative in an infection of this group but before the results of susceptibility tests have been reported; when these results become available one can change the regimen, if an equally effective, perhaps orally absorbable, or less toxic agent can be substituted.

In the third group of staphylococcal infections wherein the clinical potential of dimethoxyphenyl penicillin sodium appears improbable at this time are included such conditions as primary and secondary cutaneous infections, wound infections, dental abscesses, mastitis, otitis, sinusitis, pharyngotonsillitis, enteritis, osteomyelitis, and the majority of urinary infections. In addition to the availability of other effective, orally absorbable, less toxic antibiotics, and the desire to minimize the use of dimethoxyphenyl penicillin sodium so as to minimize staphylococcal resistance to it, the infections in this third group demand less heroic therapy since they are unlikely to prove fatal if they remain uncomplicated. Many of the infections in this group need no, or only minimal, antibacterial therapy, since many of them subside spontaneously or after surgical drainage. Most of them are "open infections," unlike the infections in the preceding 2 groups, and their discharges are likely to cause greater dispersal of any strains that acquire resistance. Also, osteomyelitis frequently is a chronic infection, and prolonged therapy with dimethoxyphenyl penicillin sodium may enhance staphylococcal resistance to the agent.

I shall attempt to present, in order of general choice, the agents used in this third group of infections. It is obvious that such heroic efforts as use of vancomycin or combined therapy will rarely if ever be necessary in pharyngotonsillitis, dental abscesses, and the like. Generally speaking, if the staphylococci resistant to penicillins G and V are sensitive to erythromycin, it may be the agent of choice since it is orally absorbed and virtually nontoxic. Next, one can consider triacetyloleandomycin,[10] which is also orally absorbed and virtually nontoxic, since there is about a 70 per cent chance that erythromycin-resistant staphylococci may be sensitive to its action. Thereafter, one might consider novobiocin since it is orally absorbed, and while it causes a rash, especially if its use is prolonged, so can dimethoxyphenyl penicillin sodium, which must be given parenterally and which has a greater potential for allergic reactions, including anaphylaxis. If erythromycin, triacetyloleandomycin or novobiocin cannot be used, then dimethoxyphenyl penicillin sodium may be the drug of choice. When this drug is not applicable, as in patients who have known allergy to penicillin, kanamycin may be tried. Kanamycin precedes consideration of vancomycin since, while both are ototoxic, kanamycin is given intramuscularly while vancomycin must be given intravenously. Chloramphenicol follows vancomycin in choice, despite its being absorbed when given orally, because of its propensity to depress the bone marrow, and precedes consideration of ristocetin, which also depresses the marrow but has the added disadvantage of requiring intravenous administration. Before or after consideration of chloramphenicol and ristocetin, depending on one's fear of ill effects on the marrow as well as depending on the laboratory facilities available, one can consider combined antibiotic therapy as outlined previously. However, the need for such cumbersome therapy is rare in infections of this group. Excellent laboratory facilities are required for intelligent application of combined therapy. Evaluation of combined therapy via serum bactericidal tests during treatment with agents empirically selected may be preferable to that based on pretreatment in vivo susceptibility tests with the use of various agents in combination. If one uses the latter method, one should check in vivo results via serum bactericidal tests to ascertain whether the effect predicted by the in vitro tests is being obtained.

Because of the effect of the tetracyclines on the bodily flora, with possible staphylococcal superinfection, my colleagues and I avoid giving these drugs to hospitalized patients. Streptomycin, because staphylococci develop resistance to it rapidly, and polymyxin B, which lacks significant antistaphylococcal action, usually are not considered in the treatment of staphylococcal infections. Of the chemotherapeutic agents, nitrofurantoin (Furadantin), because blood concentrations of it are minimal and fleeting, is used only in certain mild urinary infections. Furaltadone (Altafur)[11] has demonstrated considerable toxicity, and consequently its current application as an antistaphylococcal agent is uncertain. Sulfonamides, because of the problem of resistance, play no major role in managing serious staphylococcal infections.

One must rely to some extent on susceptibility tests in the management of staphylococcal infections, but time does not always allow such investigation. When staphylococcal infections demand treatment before such data are available, one gives a drug to which the staphylococci are most likely sensitive. Novobiocin, dimethoxyphenyl penicillin sodium, kanamycin, vancomycin and chloramphenicol might be selected in about that order of choice, and when susceptibility tests are known, one may substitute a more pertinent or less toxic agent. In instances of suspected staphylococcal bacterial endocarditis, of course, one would not consider the use of the bacteriostatic agents, novobiocin or chloramphenicol.

One can attempt to summarize the data of clinical importance regarding dimethoxyphenyl penicillin sodium as follows:

1. This agent should be used only in selected, serious staphylococcal infections when organisms demonstrate resistance to penicillins G and V.

2. It should not be used in subjects who have had allergic reactions to other penicillins, since cross allergenicity is known; as with other penicillins, it should not be used in patients with other allergies, particularly asthma, unless need for it is overriding.

3. A higher concentration of this drug in serum is required to exert a comparable bactericidal effect than is necessary with penicillin G, since while the agent is bactericidal it is less so than penicillin G, weight for weight in vitro; this is compounded by the fact that the recommended dose of dimethoxyphenyl penicillin sodium is considerably less than the amounts of penicillin G that have been given, for example, up to 100,000,000 units daily.

4. Dimethoxyphenyl penicillin sodium must be given parenterally for systemic effect, since it is poorly absorbed from the gastrointestinal tract.

5. One must avoid indiscriminate use of dimethoxyphenyl penicillin sodium; otherwise, since the degree of resistance to an agent is correlated with the amount of the drug being used in an area, and since resistance to the agent has been demonstrated in vitro, the incidence of resistant strains will probably increase.

No patient with a known heart murmur or other evidence of possible cardiovascular defect predisposing to bacterial endocarditis or endarteritis should undergo oral, colonic, rectal or transurethral operative procedures without preoperative administration of penicillin. Members of our group[16] have demonstrated that 4,000,000 units of penicillin V given orally in 4 divided doses beginning 24 hours preoperatively is as effective as other forms of penicillin given on differing schedules in decreasing bacteremia after oral surgical procedures. We are currently studying patients with known valvulitis by giving them penicillin V prior to dental operations in an attempt to test more objectively the above observation. If none of these patients develop subacute bacterial endocarditis in the 12-month period postoperatively, it may further indicate the feasibility of using penicillin V in such prophylaxis. Since not all patients can accept penicillin, we are also studying a series of patients who have received erythromycin in attempted prophylaxis in dental surgery.

Penicillin given at the time of a streptococcal infection may prevent initial or recurrent rheumatic fever and glomerulonephritis. For definitive treatment of such infections, unlike their prophylaxis, we have to the present preferred to use penicillin in forms other than benzathine penicillin G. The period of treatment should comprise at least 10 days if one uses penicillin V, or if one uses penicillin G in forms other than benzathine penicillin G. A study being carried out currently at the Clinic appears to corroborate the view of others that benzathine penicillin G can also be used in the definitive therapy of streptococcal infections.

Members of our group[17] have demonstrated that tissues of ischemic limbs usually contain detectable amounts of systemically administered penicillin. When penicillin-sensitive organisms are present in infected ischemic lesions, administration of penicillin may result in salvage of a limb.

Pasteurella multocida, a small gram-negative rod widely distributed in the respiratory and intestinal tracts of healthy animals, causes various infections in man, such as cellulitis, osteomyelitis, enteritis, bacteremia, meningitis and pneumonitis. Animal bites, including cat bites, exposure to chicken flocks, cattle and hogs, and consumption of infected rabbits have preceded human infection. The incidence of carriers of this microörganism in rats and mice is considerable. Meningitis may follow sinusitis, mastoiditis or skull fracture in a person whose nasal passages carry the organism. *Pasteurella multocida* apparently may lie dormant on the mucous membrane of the human respiratory tree for long periods, and only after trauma or other disturbance of the infected tissues, as from viral bronchitis, is acute infection provoked. The organism is not uncommonly isolated from the sputum of patients with bronchiectasis. In contrast to other Pasteurella infections, such as plague and tularemia, which are best treated with streptomycin and perhaps with the tetracyclines, infections due to *Pasteurella multocida* are best treated with penicillin. However, this organism is also susceptible to the tetracyclines.

Penicillin is the drug of choice in erysipeloid, an infection due to *Erysipelothrix rhusiopathiae.* This gram-positive micro-aerophilic rod, which may be confused with *Corynebacterium diphtheriae*, diphtheroids and *Listeria monocytogenes*, also causes swine erysipelas and infections in other animals, including sheep, cattle, horses, mice, fish and domestic fowl. In man the infection generally starts from a wound and usually remains localized, although bacteremia has occurred, and in such generalized cases endocarditis and suppurative arthritis are common. Human infections usually occur in those suffering an abrasion incurred while handling fish, shellfish, meat or poultry. Housewives, butchers, abattoir workers, fish handlers, workers in factories that manufacture buttons from animal bones, and veterinarians, via surgery and dissection of animal tissues, may be so afflicted. Two to 7 days after the abrasion, edema, a purplish-red color, and sharp definition with elevation of the inflamed area are noted; peripheral extension may take place, with clearing of the central portion of the lesion. Relapses occur, and new lesions may appear at remote sites. Fever is usually not present. Reinfection is common.

Actinomycosis currently is unusual among the systemic mycoses in that amphotericin B is not necessary in its management.[18] Penicillin has been quite effective in most varieties of actinomycosis, but some data indicate that the tetracyclines may be even more effective.[19]

The use of probenecid (Benemid)[20] may increase the content of penicillin in the blood, especially if the original content is low, but probenecid also may provoke gastrointestinal irritation. Other untoward effects of probenecid include symptoms suggestive of hypersensitivity, such as chills, fever and a rash, which may be confused with an untoward reaction to penicillin, or even with the underlying infection. Also an anaphylactoid reaction to probenecid has been observed and might be confused with one due to penicillin. Probenecid can also cause anemia, so that if it is used in an infection like subacute bacterial endocarditis it can lead to confusion. Headaches, flushing and dizziness also may be due to use of probenecid; rarely this drug may, paradoxically, precipitate an acute attack of gout, not only in the recognized victim of the disease on initial treatment with the drug, but also in one who has unrecognized gout and who receives the drug for another reason. When used in the management of infectious diseases it is one of 5 agents that may result in a positive reaction for glycosuria; the other 4 are aspirin, PAS (para-aminosalicylic acid), steroids and bacitracin. In this regard, 3 agents used in the management of infectious disease may derange the concentration of blood sugar; that is, aspirin and sulfonamides may cause hypoglycemia, while the steroids may cause hyperglycemia.

In addition to penicillin there are 2 other antimicrobial agents whose serum concentrations may be increased by simultaneous use of probenecid, namely, the sulfonamides and PAS. Also, simultaneous use of probenecid elevates the blood levels of PSP (phenolsulfonphthalein), BSP (bromsulphalein), and 17-ketosteroids; therefore, determination of these values may not be reliable in patients taking probenecid. In patients with bacterial endocarditis who are receiving this drug an abnormal result with the BSP or PSP test may be iatrogenic rather than reflecting hepatonephropathy. In addition to decreasing the blood concentration of uric acid, probenecid also decreases the blood concentration of erythromycin in experimental animals. Therefore, it may exert a paradoxical effect on antimicrobial agents; that is, it may increase the concentration of penicillin, sulfonamides and PAS, while it may decrease the concentration of erythromycin. With this in mind one should hesitate to rely on erythromycin to eradicate an infection otherwise susceptible to erythromycin in a gouty patient who uses probenecid as his uric acid diuretic. Probenecid apparently does not affect the blood concentration of streptomycin, neomycin, the tetracyclines, or chloramphenicol.

The recommended dosage of probenecid is 2 Gm. daily divided into 4 doses. Because of the mechanism of action of this agent there is no necessity to administer it in conjunction with penicillin in the presence of recognized renal impairment. Penicillin and allied drugs can depress or eliminate the gram-positive elements of the normal flora of the body and thus allow unopposed overgrowth of the gram-negative elements of the flora. When penicillin is given in large doses or for prolonged periods such overgrowth may result in pneumonia, bacteremia, and other superinfections due to gram-negative bacteria. There seems to be adequate awareness of antibiotic-induced overgrowth of the gram-positive flora, such as tetracycline-induced staphylococcal enterocolitis, but less awareness of antibiotic-induced gram-negative infections. Further data on gram-negative bacteremia[21] that are being accumulated by members of our group corroborate the observation that penicillin, by eliminating the gram-positive flora, allows overgrowth of the gram-negative flora to the extent that bacteremia has resulted.

In anticipating reactions to penicillin, a history of adverse reactions to the drug, or the report that the patient previously has exhibited other allergic manifestations, particularly asthma, may be more important than the results of skin-testing. Desensitization and use of antihistaminics often help in avoiding further reactions to penicillin. Antihistaminics and penicillinase help to combat reactions of hypersensitivity to penicillin, but, conversely, penicillinase may also cause allergic reactions including anaphylaxis. Use of penicillinase may not be effective for the treatment of allergic reactions to dimethoxyphenyl penicillin sodium, since this form of penicillin resists destruction by penicillinase. Thus, 3 drugs of adjunctive use in the management of infectious disease can cause anaphylaxis and hence can cause confusion with anaphylaxis produced by antibacterial agents; these are procaine, probenecid and penicillinase.

The symptoms of anaphylaxis usually begin 10 minutes or more after administration, and hence it is well to have a patient under observation for 30 minutes following the first dose of penicillin for which one is responsible. Also, it is wise to give the first intramuscular injection of penicillin in the arm rather than in the hip, at a level where a blood-pressure cuff can be placed above the site of injection so as to delay absorption of the antigen if necessary. Immediate treatment of anaphylaxis requires subcutaneous injection of epinephrine; part of the dose should be injected at the site of injection of the penicillin, since this may constrict local blood vessels and slow further absorption of the antigen. Absorption also can be delayed by applying a blood-pressure cuff as mentioned; in this event, epinephrine should be injected above the cuff or elsewhere in the body. Massage over the site of injection of epinephrine increases its efficacy. Corticosteroids are of use in penicillin-induced allergic states, but conjoint infection may make their use hazardous.

STREPTOMYCIN

Streptomycin is less likely to damage the auditory function of the eighth cranial nerve than is dihydrostreptomycin or a combination of them. While streptomycin may damage the vestibular function of the nerve, this is not so calamitous as deafness, since the dysequilibrium may be partially compensated for by ocular mechanisms. One should not use dihydrostreptomycin except in the rare instance in which the patient needs such an agent and can accept dihydrostreptomycin but not streptomycin. Early streptomycin ototoxicity is best detected by periodic audiometric and vestibular turning tests during treatment and 6 months after cessation of treatment. The incidence of ototoxicity is proportional to the daily dose and duration of use of streptomycin. If a patient is suspected of having a predisposition to ototoxicity, one may determine the serum concentration of streptomycin; ototoxicity is unlikely if blood levels are 65 mg. per 100 ml. or less and if the agent is given in amounts of not more than 2 Gm. daily for 2 weeks or less. With normal renal function, ototoxicity is unlikely if no more than 2 Gm. of streptomycin is given daily for no longer than 14 days, or if no more than 1 Gm. is administered daily for no longer than 4 weeks. Delayed ototoxicity may occur as long as 6 months after use of these drugs.

Albuminuria and cylindruria occur with the use of streptomycin, but azotemia is rare. With inadequate renal function, azotemia may be accelerated by streptomycin, and its accumulation in the blood furthers ototoxicity. Paresthesia is common and insignificant; skin eruptions are infrequent. Streptomycin is one of 3 antibacterial agents that may precipitate acute gouty arthritis; the others are penicillin and the sulfonamides, particularly sulfathiazole. Ancillary drugs or procedures that are used in the management of infectious diseases and may also precipitate gout are (1) steroids, (2) probenecid (both probenecid and steroids have a paradoxical effect since they may both precipitate and help control an attack), (3) blood transfusion, as might be performed in bacterial endocarditis and some fungal diseases, and (4) surgical procedures, as in incision and drainage of an abscess.

Although infections of the blood stream caused by the beta-hemolytic *Streptococcus pyogenes* are adequately treated with penicillin alone, bacteremia due to other strains of streptococci may be managed better by combined streptomycin-penicillin therapy.[22]

In 1953 Geraci and I[23] published data strengthening the belief that subacute bacterial endocarditis caused by alpha-hemolytic streptococci such as *Streptococcus viridans*, which are usually quite sensitive to penicillin, could be managed successfully in a majority of cases by means of a 2-week course of procaine penicillin G in doses of 1,000,000 units plus streptomycin in doses of 1 Gm., both injected intramuscularly every 12 hours. This regimen has been referred to as "2-2-2 therapy"; that is, penicillin is used in amounts of 2,000,000 units a day and streptomycin in amounts of 2 Gm. a day, and treatment is continued for 2 weeks. If one also gives probenecid, its daily dose likewise is 2 Gm. Not everyone agrees with this regimen, and some prefer to give only penicillin in larger doses for a longer period. We employ a similar regimen of penicillin and streptomycin in bacteremia due to alpha-hemolytic streptococci, such as *Streptococcus viridans*, but discontinue therapy when the patient has been afebrile for 72 hours and 3 consecutive blood cultures are reported as negative. We prefer combined therapy in bacteremia due to alpha-hemolytic streptococci, rather than the use of penicillin alone, because (1) combined therapy decreases concern over distinguishing endocarditis from bacteremia due to such organisms since they cause endocarditis more frequently than bacteremia, and (2) it decreases the morbidity rate.[22]

In 1954 Geraci and I[9] published data indicating that when *Streptococcus faecalis* or other enterococci, which usually are less sensitive to penicillin, cause bacterial endocarditis, aqueous crystalline penicillin G given by continuous intravenous drip plus streptomycin injected intramuscularly in amounts of 0.5 Gm. every 12 hours gave satisfactory results in a majority of cases. We employ an isotonic solution of sodium chloride or one containing 5 per cent dextrose in distilled water as the vehicle for the penicillin and add a small amount of heparin (25 to 50 mg.) to the infusion in the hope that venous thrombosis at the site of insertion of the needle will be delayed. Usually, the rate of flow can be regulated so that 1 liter of fluid containing half the daily dose of penicillin is delivered within 12 hours. The daily dose of penicillin is determined in part by results of the so-called serum bactericidal test; it varies from 20,000,000 to 100,000,000 units. That dosage is accepted when the patient's serum, obtained after a given dose of penicillin plus the usual dose of streptomycin and diluted 1:4 or more, produces an in vitro eradicative effect on cultures of the organisms responsible for the infection. Such a regimen is continued 4 to 6 weeks in cases of endocarditis, and in cases of bacteremia until the patient is afebrile 72 hours and the results of 3 consecutive blood cultures have been reported as negative.

Streptomycin-tetracycline therapy is considered by many to be the treatment of choice in brucellosis; others use one of the tetracyclines alone, but the period of treatment may have to be considerably increased beyond the 2 to 4 weeks required for combined therapy in order to minimize the relapse rate.[24-27] Other agents such as erythromycin and novobiocin have not been completely evaluated as antibrucellar agents. In 1956 Spittel, Nichols and I[21] pointed out that we had used streptomycin in combination with the tetracyclines effectively against bacteremia caused by some gram-negative enteric bacilli such as coli-aerogenes and Proteus organisms. As indicated previously, members of our group are reviewing our more recent experiences with gram-negative bacteremias, and again streptomycin-tetracycline therapy appears to be preferable in the majority of these infections. Some data unearthed in our studies on gram-negative bacteremias and perhaps worth remembering are that 50 per cent of the cases occur in postoperative patients, that in two thirds of the cases the portal of entry is urinary while in the remaining one third it is intestinal, and that 3 diseases likely to be complicated by this type of bacteremia are cirrhosis, diabetes mellitus and blood dyscrasias.

Use of streptomycin against tuberculosis, in combination with other antituberculous agents, hardly requires reiteration. Tularemia is one of the few diseases in which streptomycin seemingly can be employed alone with excellent results.

(References for both Part I and Part II will be listed at the end of Part II.)

Study of a New Sustained-release Antitussive Preparation (Carbetapentane)

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THE PRINCIPLES OF TREATMENT for acute bronchitis have long been recognized. They include analgesic-antipyretic agents to reduce pain and fever, antibiotics or chemotherapy when indicated to control infection, and appropriate agents to relieve over-reactions of the bronchial tree. The latter are most commonly presented as bronchospasm, inflammation, coughing, and excessive secretion of viscid mucus.

"This last principle is an important factor often given too little attention by the physician or patient."[1]

Perhaps the reason for the indifference of some physicians to these symptoms of bronchial reactivity has been the multiple disadvantages that usually accompany traditional remedies.

A recent formulation* combines 4 agents, each of which has proved excellent in its class for controlling or relieving the major manifestations of bronchial hyperreactivity. This study would indicate that the combination possesses sufficiently distinct advantages to recommend it for extensive use, particularly since it is presented in a form which insures prolonged release of the medication.

The principal agent of the formulation is a non-narcotic antitussive, carbetapentane, which acts centrally to depress the cough reflex. Well controlled laboratory studies demonstrate that carbetapentane is 1½ times as effective as codeine in controlling cough, and clinical evaluations support this finding. Since the opium derivatives, quite apart from their addictive liability, constrict the bronchi, depress respiration, and tend to dry the mucosal lining of nose and throat, an effective cough depressant free from these secondary effects is highly desirable.

In addition, the preparation contains 2 related sympathomimetic amines—ephedrine, principally to relax the bronchi and facilitate expectoration, and phenylephrine, mainly to decongest inflamed mucosal membranes. Also included is the well tolerated antihistamine, chlorpheniramine, to reduce bronchial secretion and counteract allergic manifestations.

Each therapeutic component is combined as the salt of gallotannic acid. This chemical form gives a molecule of low aqueous solubility, slowly but completely released for controlled, even absorption. Hydrolysis is independent of a specific pH or motility in the gastrointestinal tract. Bonding of the active components in a protocolloidal complex (polygalacturonic acid) further slows the rate of release.

This physicochemical combination acts much like an oil-base intramuscular injection and has been called an "oral repository" form of release. It is known as the Durabond Principle and provides sustained therapeutic activity over a relatively long period,[2] allowing for convenient administration and eliminating sharp peaks and shallows of drug activity which can occur with waxes, resins, or enteric coatings.

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* Manufactured as Rynatuss Durabond tabules and suspension by Irwin, Neisler & Co., Decatur, Illinois.

Choice of the component drugs would indicate a high ratio of therapeutic activity while avoiding many of the undesirable side-effects of similar agents. Their sustained release from the protocolloidal complex further tends to decrease unwanted secondary activity.

MATERIALS AND METHODS

The antitussive formulation evaluated in this study consisted of sustained-release tabules containing 60 mg. of carbetapentane tannate, 5 mg. of chlorpheniramine tannate, 10 mg. of ephedrine tannate, and 10 mg. of phenylephrine tannate.

The study was conducted by the double-blind technic. In 119 patients the primary diagnosis was bronchitis, frequently associated with coryza. Ten others had pneumonia, making a total of 129 patients studied. Most had such concurrent respiratory symptoms as nasal congestion, postnasal discharge, or rhonchi. Seventy were given the active preparation, and 59 were given placebo tablets identical in appearance to provide a control for evaluating the therapeutic activity of the formulation.

All but 1 of the patients receiving the active medication were given 2 tabules immediately. Twenty-two were instructed to take 2 every 12 hours; 34 were told to take 2 every 4 hours; 9 were told to take 1 every 12 hours, and 4 were told to take 2 after meals and at bedtime, as indicated in tables 1 and 2.

TABLE 1

Therapeutic Results: Relief of Cough

Dosage Schedule	No. of Patients	Degree of Relief			
		Excellent	Good	Fair	Poor
2 q. 4 h.	34	31	3		
2 q. 12 h.	22	15	6		1
1 q. 12 h.	9	6	3		
2 p.c. and h.s.	4	3	1		
1 p.c. and h.s.	1	1			
TOTAL	70	56	13		1
Percentage	100	80	18.5		1.5

The amount of the drug and the frequency of administration were varied in accordance with the severity of the symptoms. In addition, antimicrobials were prescribed as indicated to combat infection, and aspirin was given to reduce pain and fever as needed. Criteria for determining the effectiveness of the medication were both the patient's subjective relief and the physical findings on examination of the nose, throat and lungs at each visit.

TABLE 2

Therapeutic Results: Relief of Respiratory Symptoms

Dosage Schedule	No. of Patients	Degree of Relief			
		Excellent	Good	Fair	Poor
2 q. 4 h.	34	32	2		
2 q. 12 h.	22	13	8		1
1 q. 12 h.	9	5	4		
2 p.c. and h.s.	4	4	0		
1 p.c. and h.s.	1	1			
TOTAL	70	55	14		1
Percentage	100	78.5	20		1.5

RESULTS

Patients receiving placebos (control group) had the generally poor results shown in table 3.

TABLE 3

Placebo Results

	Excellent	Good	Fair	Poor	Total Patients
Cough relief	4	2	9	44	59
Percentage	6.7	3.5	15.2	74.6	
Respiratory relief	6	2	16	35	59
Percentage	10.1	3.3	27.1	59.5	

The placebo was given on varied dosage schedules like those followed with the test medication, but it has not been thought necessary to break them down, since the results were similar regardless of the spacing of dosage.

In contrast to the control group, with its high incidence of failures, the results in the patients receiving the medication were consistently satisfactory. Within the treatment group the response was essentially uniform with regard to total effective response. The principal difference was one of degree of relief, this being related directly to the total daily dosage. There was no appreciable difference in duration of relief, those on a 12-hour dosage interval and those on more frequent dosage intervals reporting continued relief while receiving the medication.

Details of the degree of relief of respiratory symptoms and excessive coughing for the treatment group are given in tables 1 and 2. Overall, 80 per cent obtained excellent and 18.5 per cent good relief of cough. Seventy-eight per cent had excellent relief of other respiratory symptoms, and 20 per cent had good relief.

Of the patients' taking the medication every 4 hours, 94 per cent had excellent relief of respiratory symptoms and 91 per cent excellent relief of excessive cough. In none was the degree of relief disappointing.

Results were quite satisfactory also when the medication was given every 12 hours. In this group 68 per cent of the patients had excellent relief of cough and 27 per cent good relief, for a total of 95 per cent. Sixty per cent had excellent relief of other respiratory symptoms, and 36 per cent had good relief.

In a small group of milder cases 1 tablet was given every 12 hours. Six of the patients had excellent relief of cough, and the remaining 3 had good relief. Relief of other respiratory symptoms in these patients was correspondingly satisfactory.

As would be expected, some patients require larger doses of the medication than others. The reactions of these patients indicate that the medication under evaluation can be given at comparatively frequent intervals without inducing uncomfortable side-effects.

Discussion

In this double-blind study neither the patients, the physician nor his nurse knew whether the active medication or a placebo was being given. Nor was the investigator aware of the unusually good symptomatic relief obtained by the patients in the treatment series or of the generally poor results in the contratest group until the study was completed.

The revealed results lead to the conclusion that the particular combination of medicaments in the product studied produce a highly favorable palliative response.

In addition to the non-narcotic antitussive agent, the tabules contain an effective antihistamine and 2 vasoconstrictive agents with differing durations of action. The rationale of such a combination has been borne out in the clinical results. The vasoconstrictors not only are efficient bronchospasmolytic agents[3, 4, 5] but also provide an effective buffer to antihistamine drowsiness. Antihistamine medication, in addition to being antiallergic, possesses bronchorelaxant activity[6] and is employed to supplement ephedrine.[7] The balanced action achieved with these component drugs undoubtedly contributed to the very low incidence of side-effects observed in this investigation.

Other investigators[8, 9, 10] have reported a similarly low level of side-effects with decongestive medication employing the same protocolloidal principle.

Summary

In a controlled study of 129 patients with bronchitis and pneumonia a new sustained-release antitussive preparation was investigated. The antitussive, sympathomimetic and antihistaminic components were bonded for sustained release in a process known as the Durabond Principle. Overall, 81 per cent of the 70 patients on the formulation had excellent and 19 per cent good relief of excessive cough. Seventy-eight per cent had excellent relief and 22 per cent good relief of other respiratory symptoms. Side-effects were considerably lower than those reported by 59 additional patients given placebos.

(*Continued on page 568*)

Steroid-antibiotic Aerosols: A Practical Modality in Otitis Externa

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THE TERM OTITIS EXTERNA is most frequently used to describe a diffuse inflammation, with or without secondary infection, which affects the external ear and often occurs after swimming in fresh water. More recently the use of this term has been extended to include inflammatory and erythematous dermatoses of the external ear due to a variety of allergenic contactants or to mechanical traumata.

Burow's solution as well as a variety of ointments, creams and ear drops have been employed in the management of otitis externa. The efficacy of these medications has been greatly limited by the difficulty in achieving optimal diffusion over the affected areas, particularly when the external auditory canal is involved. Thus, when the corticosteroid-antibiotic aerosols recently became available, it was decided to evaluate their usefulness in this benign but unpleasant and sometimes stubborn condition.

MATERIALS AND METHODS

A prednisolone-neomycin aerosol* and a dichlorisone-neomycin aerosol* were selected for this study with the dual purpose of evaluating the effectiveness of these preparations in otitis externa and of comparing them with each other in this condition. These aerosol preparations were given to a series of 36 consecutive patients from the authors' private practices. This series comprised 11 males and 25 females, ranging in age from 16 to 60 years.

The series included cases due to various contactants as well as patients with seborrheic or psoriatic involvement, and some of unknown etiology. Twenty-one patients had had the disease for 6 months to 10 years and came to us during an acute or subacute exacerbation, and 15 patients had contracted otitis externa from a few days to several weeks prior to being seen. The 21 patients who had had the disease for 6 months or more had all received previous medications.

During the initial office visit the auditory canal was irrigated and cleansed with warm water. To avoid accidental spraying into the eyes and producing conjunctival or lid irritation, patients were carefully instructed in the proper use of the aerosol spray. The technic, which should be demonstrated to the patient, consists of holding the nozzle of the aerosol container at a distance of 2 to 3 inches from the meatus and spraying for 3 to 4 seconds. While the ear is being sprayed the eye on the same side should be protected by covering it with a wet washcloth. Patients were told to apply the medication 4 to 6 times a day, and to cleanse the auditory canal with peroxide.

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* The prednisolone-neomycin aerosol and the dichlorisone-neomycin aerosol used in this study were furnished as Meti-Derm with Neomycin Aerosol and Neo-Diloderm Aerosol, respectively, through the courtesy of G. Kenneth Hawkins, M.D., Department of Clinical Investigation, Schering Corporation, Bloomfield, New Jersey.

RESULTS

Both steroid-antibiotic aerosol formulations proved definitely superior to previously employed medications. The fine mist dispensed by these aerosol sprays was most effective in covering the entire cutaneous surface of the external auditory canal. Marked improvement was seen within 12 to 24 hours in acute cases as well as in acute and subacute exacerbations of chronic cases. Erythema, oozing, edema and crusting usually disappeared completely within 4 days, with the epidermis of the meatus and auditory canal acquiring a near-normal appearance. A faint pink erythema was the only residual symptom after 1 week of therapy.

There was 1 relapse in the series. A female patient who had cleared up on aerosol therapy had a recurrence after 5 months; however, it is questionable whether this was a true relapse, since the patient, who wears a hearing aid, did not practice proper canal hygiene. The only side-effect observed in this series was a fleeting sensation of burning during the initial application. This reaction did not occur on subsequent applications.

COMMENT

The corticosteroid-antibiotic aerosols are practical and effective therapeutic modalities in the management of otitis externa. The steroid component, whether prednisolone or dichlorisone, provides anti-inflammatory and anti-allergic activity to control inflammation, erythema and edema, while the neomycin exerts its antibiotic effects upon secondary infection. The aerosol sprays a fine mist of droplets which allows uniform diffusion over the affected areas such as could not be achieved with other topical medications. It is our opinion that the use of steroid-antibiotic aerosols is the approach of choice in otitis externa.

Hypertension Secondary to Unilateral Renal Ischemia

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The growing recognition that clinical hypertension may be secondary to unilateral renal ischemia confronts the physician with a particularly difficult situation. He is concerned first with the problems of accurate diagnosis and secondly with the selection of the patients that may benefit from a surgical approach.

The occurrence of unilateral renal disease in the hypertensive population probably is less than 5 per cent, with even a smaller number who might anticipate a successful result from operation. To the individual concerned, however, this is of great import and may be life-saving. The clinical recognition of this entity has followed the early experimental work of Goldblatt and others who produced hypertension in animals by various technics of inducing renal ischemia. This is the reverse of the usual experimental work that follows the clinical description. Our complacency in accepting many "essential" forms of disease may be justly disturbed by the continued recognition of clinical counterparts to basic physiologic and biochemical experiments.

Report of Case

V. M., a 24-year-old colored female nurse was seen in the emergency room of the Washington Hospital Center because of severe recurrent headaches and nausea. The progressively severe headaches had been noted since the age of 17 with premenstrual exacerbation. She was told that her blood pressure at that time was 180/90 and rose from 210/130 to 240/140 with stress or during her menses. Treatment at first consisted of the use of sedatives and a low-salt diet. Subsequent treatment consisted of the use of reserpine, Diuril and Apresoline with moderate decrease of the blood pressure to 160/90. The patient's mother was known to have hypertension. Physical examination was essentially negative except for blood pressure readings of 172/116 and grade II hypertensive changes in the retinal vessels. Laboratory studies including routine urinalysis, blood urea nitrogen, and urinary catechol amines were normal. Phenolsulfonphthalein excretion was 30 per cent in 15 minutes, and the creatinine clearance was 115 c.c. per minute. A Fishberg concentration test showed a normal response. With a cold pressor test the blood pressure rose from a base line of 150/110 to 176/126. Under Amytal sedation there was a drop from 170/120 to 140/110. An intravenous pyelogram was read as normal.

Because of the patient's age and the level of the blood pressure readings, studies were undertaken to rule out unilateral renal disease. After placing the patient on a regular diet for 7 days with added salt for 3 days, a Howard test was done. Under local anesthesia both ureters were catheterized, with the following results:

	Left	Right	Bladder
First period			
Volume (c.c.)	30	140	70
Sodium (mg./L)	3.5	7.5	5.3
Second period			
Volume	55	140	0

A renal arteriogram was done by retrograde aortic catheterization through the left brachial artery. The catheter was located just above the renal arteries. An injection of 20 c.c. of 90 per cent Hypaque was made with a Lehman lever-type power syringe. Films were taken at ½-second intervals for 4 seconds and at 1-second intervals for 4 seconds. As noted in figure 1, the right kidney showed a normal vascular pattern followed by a normal-appearing nephrogram. The left renal artery was seen to be narrowed with some minimal poststenotic dilatation. There appeared to be delayed arterial filling of the left kidney. The nephrogram as seen in figure 2 showed flattening of the upper pole of the left kidney.

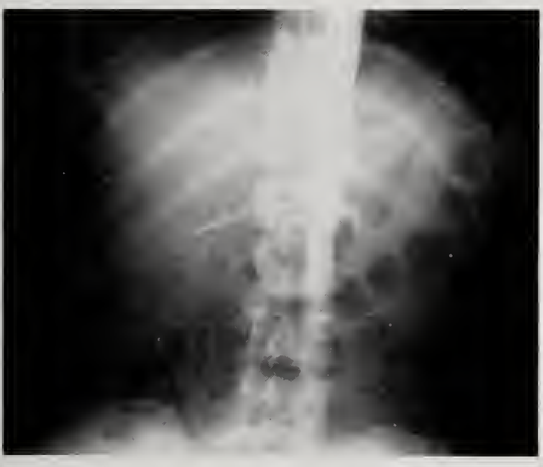

FIG. 1. Renal arteriogram demonstrating narrowing of the left renal artery with post-stenotic dilatation. There also appeared to be delayed arterial filling of the left kidney.

The patient was further evaluated at the National Heart Institute by Dr. Louis Gillespie, Jr. and Dr. Thomas Stamey. Differential ureteral catheterization studies again demonstrated a discrepancy of function between the kidneys. An abdominal laparotomy was performed at the National Heart Institute by Drs. Stamey, Spencer and Peiser.

A thrill was faintly palpable near the hilus of the left kidney. The pressure measured 162/135 mm. Hg in the proximal renal artery. Just distal to the bifurcation the mean pressure was 60 mm. Hg. The stenotic area was incised, and a dacron patch graft was placed between the normal proximal renal artery and the site of the bifurcation. In spite of the graft a mean pressure gradient of 60 mm. Hg persisted and further dissection of the secondary renal vessels suggested further disease. Accordingly, a nephrectomy was performed.

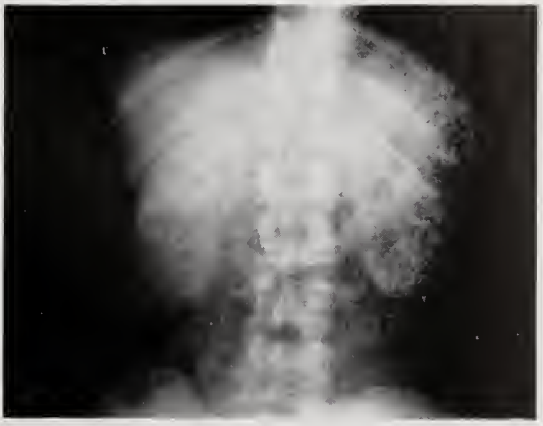

FIG. 2. Nephrogram showing flattening of the upper pole of the left kidney.

Following surgery the patient developed acute hypotension similar to that seen after the removal of a pheochromocytoma. Vasopressor drugs were infused and after several hours were discontinued. Her blood pressure since surgery in a 9-month follow-up period has ranged between 118/78 and 134/84 with no medication, and for the first time in over 5 years she has been free of premenstrual headaches. The pathologic report described fibrosis and elastosis of both the intima and medial layers of the left renal artery. There were flattening and atrophy of the upper poles. The tubules showed degenerative changes presumed to be secondary to ischemia. The renal arterioles were unremarkable.

COMMENT

There are several points of interest noted in this case. First was the satisfactory result after 7 years of hypertension. The question was raised as to whether the "good" kidney had vascular changes secondary to the hypertension and would maintain the high pressure even after relief of the renal ischemia of the left. The Howard test and the renal arteriogram showed a significant degree of difference in the function of both kidneys and a possible correctable vascular lesion on the left. The clinical history including the family history of hypertension and the routine laboratory procedures suggested nothing beyond an "essential" type of hypertension. Pathologic examination of the removed kidney demonstrated the parenchymal vessels to be normal, implying a protective action of the narrowed renal vessels from the vascular changes usually seen with prolonged sustained hypertension. Unfortunately, tissue from the remaining kidney was not obtained because of the duration of the operative procedure.

Discussion

Although there are several theories[1, 2] as to the pathogenesis of hypertension secondary to renal ischemia, the most attractive one concerns the release of a precursor of a potent vasoconstrictor substance.[3] This material has been identified as the proteolytic ferment, renin, which in turn acts on a protein substrate produced by the liver. A vasoinactive decapeptide is formed which in turn is split by a "specific converting enzyme" to an octapeptide which is the active pressor agent, angiotensin. What constitutes the proper stimulus to the kidney for the release of renin is questionable.[4] There is good evidence that this is secondary to a reduction in pulse pressure.[5] In this connection it is of interest that the mean pressure distal to the constriction in the case reported was normal in association with a reduced pulse pressure.

In man, hypertension secondary to unilateral renal disease was reported in 1937 by Butler,[6] who described restoration of normal blood pressure in a hypertensive patient with unilateral pyelonephritis. Several sporadic case reports and smaller series followed with relatively discouraging results. In the light of recent experiences,[7, 8] many of these earlier disappointing cases would now have had a more favorable outcome, with the improvement in diagnostic technics permitting the selection of patients who would be most likely to benefit from surgery.

There are certain clinical features that may suggest that further studies would be indicated in a given hypertensive patient to rule out unilateral renal disease.[9] The onset is often relatively abrupt in a person with previously normal or benign hypertension. The subsequent course may then be similar to the accelerated or malignant form of hypertension. This was not found to be true in our case. Although the disease may begin at any age, one should be particularly suspicious in patients with the onset of hypertension before the age of 20 or after 50. Trauma to the renal area may be the precipitating factor, and on occasion a bruit suggestive of an arteriovenous fistula can be heard when listened for. In cases of renal artery thrombosis or embolism the onset may resemble renal colic with acute flank or lower abdominal pain. In summary, the following indications would warrent a search for unilateral renal disease[10]:

1. A disparity in size or excretory function of the kidneys as seen on an intravenous pyelogram (normal in the case presented).
2. A young patient without a family history of hypertension (a family history does not rule out the possibility).
3. Sudden development of malignant hypertension in a middle-aged or elderly patient.
4. Abrupt change in a long-standing hypertensive.
5. Malignant hypertension in a patient without a preliminary period of essential hypertension.

The various pathologic lesions that have been encountered are:

1. Intrinsic changes: atherosclerotic plaques (most common), thrombosis and embolism, congenital or acquired stenosis, coarctation, aneurysm, thromboangiitis.
2. Extrinsic changes: kinking and torsion, and external pressure by tumor, bands, aneurysm, fibrous hull, or trauma.

The diagnostic studies by Howard and coworkers[8] involving differential volume and sodium excretion from the kidneys again exemplify an ingenious application of basic physiologic experimentation to a clinical problem. It had been noted in animal experiments[11, 12, 13] that partial constriction of 1 renal artery resulted in a marked reduction in urine flow and a lower sodium concentration from the ischemic kidney. The applied technic for these studies with bilateral ureteral catheterization has been outlined in detail elsewhere.[8, 10, 14] Suffice it to say, the services of an interested, skilled urologist are essential, together with the proper preparation of the patient with an adequate salt intake, discontinuance of diuretics, and proper hydration. A reduction in volume of the urine of at least 50 per cent and a reduction of sodium concentration of at least 15 per cent from 1 kidney as compared with a specimen obtained simultaneously from the other indicates renal ischemia. It is also possible that a segmental infarction of 1 kidney, which segment was secreting no urine, may lead to a lesser volume of urine from that side, although chemically the urine specimens from both sides may be identical.

There has been some disagreement in the past as to the complete reliability of the findings with differential excretion studies.[15] This has been particularly true in patients with bilateral occlusive renal disease and some cases of pyelonephritis. One must be careful that the test be carried out according to the recommendations as outlined by Howard et al.[7, 8]

Recent modifications of the Howard test including differential PAH (para-amino hippuric acid) and urine osmolarity may well dispel many of the objections raised and provide even a more clear-cut differential diagnosis.[16]

Subsequent to the aforementioned studies, an exact anatomic characterization of the lesion is extremely valuable. This is possible by the application of several technics for renal arteriography.[17, 18, 19] Congenital anomalies such as aberrant vessels and aneurysms may be distinguished, and the presence of bilateral obstructing lesions would be important information to the surgeon contemplating a vascular repair and/or nephrectomy. It must be emphasized that the procedure is not entirely innocuous and should be reserved for cases in which the diagnosis is quite probable and in which surgery is contemplated. Before aortographic studies are done one must be particularly careful to rule out a pheochromocytoma as the cause of hypertension.[20]

In an effort to avoid potentially hazardous investigative procedures Winters[21] has attempted to determine the vascularity of the kidney by an intravenous injection of I^{131}-labeled Diodrast. Continuous recording of the gamma radiation over the renal area points to diminished vascularity or impaired tubular function by any notable diminution or delay in appearance of the labeled indicator. This may prove to be a useful screening test. A negative result has been said to rule out relative unilateral disease.

The surgical treatment resolves itself into nephrectomy or restoration of adequate renal arterial blood flow. Nephrectomy is by far the more simple and less hazardous of the 2 operations, imposing less stress on both the patient and the surgeon. In many cases it is the procedure of choice. However, a direct attack on the occlusive lesion is gaining preference whenever possible. Certainly, when the occlusive process is bilateral, direct vascular restoration should be employed, occasionally combined with nephrectomy. When a single remaining or solitary kidney is affected, the direct arterial repair is obligatory. Increasing evidence suggests that in many cases of unilateral renal artery narrowing the impaired kidney is the spared kidney. This seeming paradox is easily resolved in the realization that a partially obstructing lesion in the renal artery protects the kidney from the ravages of hypertension. In unilateral disease the contralateral kidney is subjected to the full impact of the hypertension, which, if progressive and severe, may lead to a necrotizing arteriolitis. In time, then, the arterioles of the kidney with the normal renal artery become damaged, while those of the ischemic kidney may be the only ones in the body which are spared. Thus, by the time the patient is seen for surgical evaluation the ischemic kidney may be the better kidney. Nephrectomy, therefore, should be considered with caution.

Even with a clear-cut diagnosis, surgery would be ill advised if (1) the patient had extensive cerebral or coronary disease, (2) renal function was severely depressed, (3) the patient was elderly, (4) the patient was a middle-aged person with moderate hypertension and relatively stable renal function, or (5) there were inadequate surgical experience.

SUMMARY

A case report of a 24-year-old patient with hypertension of 7 years' duration relieved by nephrectomy has been presented. Although the follow-up period has been less than a year, the shocklike state following removal of an ischemic kidney and persistent normotensive levels are of prognostic favor. The diagnostic studies and surgical approach have been discussed. Although constituting a relative minority of the hypertensive population, the sphere of "essential hypertension" has been taken in by another notch by the application of basic physiologic studies to clinical medicine.

ADDENDUM: The patient V. M. continues to have normal blood pressure readings 16 months after her surgery. At present she is in her fourth month of pregnancy, with normal pressure.

ACKNOWLEDGMENTS: The authors wish to express their appreciation to Dr. Louis Gillespie of the National Heart Institute and Drs. Thomas Stamey and Frank Spencer of Johns Hopkins Hospital for their assistance in the further evaluation and definitive surgery on this patient.

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Peripheral Neuropathy in Nonfamilial Primary Amyloidosis

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PRIMARY SYSTEMIC AMYLOIDOSIS is considered to be a rare disease. Even more uncommon are cases with prominent neurologic symptoms. Peripheral neuropathy is the most prominent neurologic manifestation, occurring both in the familial and nonfamilial forms of primary amyloidosis. Peripheral neuropathy in the nonfamilial variety is infrequent in occurrence in contrast to the familial form, in which it is found in about 93 per cent of cases. Review of the literature reveals case reports by DeBruyn and Stern,[1] Findley and Adams,[2] DeNavasquez and Treble,[3] Goldman and Gerstl,[4] Love,[5] Fisher and Preuss,[6] Goetze and Krueche,[7] Andrade,[8] Königstein,[9] Strich and Wade,[10] Ritama and Björkesten,[11] Kernohan and Woltman,[12] Clark and Bennett,[13] Sullivan, Twitchell and Gherardi,[14] and Chambers, Medd and Spencer.[15]

Amyloid neuropathy usually cannot be distinguished from peripheral neuropathy of some other origin unless manifestations such as macroglossia, cardiac or laryngeal involvement, etc., are present to provide some indication of the nature of the condition. The diagnosis is seldom made clinically, many of the case reports indicating that the diagnosis was made on the basis of autopsy studies. Characteristic of the disease is the progressive worsening of the patient's condition resulting in death from cardiac involvement, gastrointestinal obstruction, intercurrent infection, or renal complication. Duration of the disease is usually several (2 to 3) years with patients occasionally surviving for longer periods of time. Initial symptoms may be unilateral or bilateral. They are predominately sensory, the first symptom usually being pain, often lightning in character. Pain and temperature sensations are most frequently involved, but all sensory modalities may be severely impaired. Motor signs are those common to all polyneuropathies, with weakness and atrophy usually more marked distally. Cranial nerves are rarely involved. The only reference to possible cranial nerve involvement is found in the case report of Kernohan and Woltman,[12] in which they described the presence of a "left facial palsy." Thickened peripheral nerves, according to some authors, are a common finding. Chambers, Medd and Spencer,[15] in a report of 6 cases of primary amyloidosis, described the presence of enlarged peripheral nerves in the 3 patients in whom a peripheral neuropathy was present.

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Most of the reported cases of nonfamilial amyloid neuropathy have occurred in white patients, usually men above the age of 50. Jones and Frazier[16] (1950) in a series of 600 routine autopsies reported 4 cases of primary amyloidosis in Negroes with symptoms of numbness of the legs of 6 years' duration in 1 case, numbness of the fingers (present for an 18-month period) in another, numbness of the hand of 1 year's duration in the third, and "progressive loss of muscle function terminating in dysphagia" in the last case. No objective neurologic manifestations were described, however, in any of these patients. The pathologic report in 2 of the cases described the presence of "amyloid in nerves." There is only 1 other case report in the literature of amyloid neuropathy in a Negro, a case reported by Clark and Bennett (1957) of a 64-year-old man with symptoms of cholecystitis and recurrent pain and numbness of the hands, feet and anterior half of the tongue. The pain was described as being so disabling that the patient found it impossible to use his hands or feet. He wore gloves at all times due to the pain. He showed no objective manifestations of neurologic disease. He expired suddenly 2 months after admission. The only peripheral nerve examined at autopsy was the left sciatic, which showed focal degeneration and amyloid infiltration of the nerve bundle.

DeNavasquez and Treble[3] in 1938 were the first to emphasize that the complete absence of sensory change in amyloid neuropathy was unusual. These authors described a case of a 36-year-old man with weakness and wasting of the muscles of the limbs and trunk, inability to walk, difficulty in turning in bed, feeble arm reflexes, and absent knee and ankle reflexes. There were no sensory abnormalities present. Chambers, Medd and Spencer[15] (1958) reported 3 cases of amyloid peripheral neuropathy with prominent sensory manifestations and indicated that by the time the patient came to the hospital the picture was one of a chronically ill man with sensory disturbances and weakness of the legs and that the complete absence of sensory change was unusual. Rukavina[17] in reviewing the literature (154 cases) of primary amyloidosis reported neurologic findings in 21 cases with normal sensation in only 4 cases. Review of the remaining case reports in the literature reveals no other cases without sensory deficits.

Chambers, Medd and Spencer (1958) reported a case of amyloid peripheral neuropathy with several unusual characteristics. The patient was a 42-year-old man with symmetrical wasting and weakness of the upper and lower extremities, most marked distally, bilateral foot drop, fasciculations in all muscles of the upper extremities, sensory deficit, and enlarged great auricular and supraclavicular nerves. The unusual features centered around the long duration of the illness (approximately 14 years) and the fact that it was only after a 14-year period that the first clinical evidence of involvement of tissues (auricular fibrillation and cardiac failure) other than the nervous system appeared.

The following case report is of interest because of several unusual features:

1. It represents one of the few cases reported in the literature of a Negro with amyloid neuropathy.
2. The neuropathy was motor in type, there being no history of peripheral pain and no sensory abnormalities.
3. The duration of the neuropathy, about 9 years, was longer than most cases reported.
4. There was cranial nerve (right facial) involvement.
5. There was no clinical evidence of involvement of tissues other than the peripheral nerves and muscles at the present time.
6. The patient has remained ambulatory.

REPORT OF CASE

The patient is a 41-year-old Negro who had previously been hospitalized at the Veterans Administration Hospital, Ft. Howard, Maryland in 1954 because of weakness and wasting of the musculature of all extremities. Records revealed that in 1952 he began to notice a feeling of fatigue in the right upper and lower extremities, followed a short while later by weakness in the same extremities and in the muscles of the right side of the face. In 1953 the weakness extended to the left lower extremity, and in December, 1953 it appeared in the left upper extremity. The weakness progressed insidiously and was later accompanied by wasting of the musculature of the extremities. There was a 20-pound weight loss over a 6-month period prior to the hospitalization in 1954. The family history was negative for neurologic disease. Examination at that time revealed a steppage gait with bilateral foot drop, more marked on the right, facial asymmetry with weakness of the right lower facial muscles, and weakness and wasting of all extremities, more marked distally and on the right. The right triceps and both ankle reflexes were absent and only a trace was present in the other deep tendon reflexes. Sensation was intact. Complete blood count, urinalysis, VDRL, fasting blood sugar, chest and lumbar spine X-ray films were within normal limits. The electrocardiogram was borderline with an S-T elevation in V_4. The patient was fitted with a foot-drop brace and discharged with a diagnosis of progressive muscular dystrophy. He was able to continue working for the next 2 years, but due to progression of the weakness it was necessary for him to give up his job as a truck driver.

The patient was admitted to our Hospital on January 5, 1960, with a cellulitis of the left lower extremity secondary to an infection of the foot. Neurologic consultation was requested because of weakness and wasting of muscles of the extremities. The man was alert, oriented, coöperative, ambulatory, and in no acute distress. The speech was mildly dysarthric. There were no vitreous opacities seen (confirmed by slit-lamp examination). No macroglossia was present. The cardiovascular system was within normal limits. The liver and spleen were not palpable.

Neurologic examination revealed the presence of a right peripheral facial weakness. The deep tendon reflexes were absent except for a trace bilaterally in the patellars. There was marked atrophy of the deltoids, biceps, triceps, forearm, wrist and extrinsic hand muscles, more pronounced on the right. The lower extremities were very weak, with atrophy of the dorsiflexors of the feet, gastrocnemius and soleus muscles, also more pronounced on the right. No fasciculations or myotonic reaction was present. The ulnar nerves were questionably enlarged. Sensation was intact. Gait was steppage in character with bilateral foot drop, more marked on the right.

Laboratory studies consisting of hemogram, sedimentation rate, VDRL, total eosinophil count, LE preparations, blood urea nitrogen, 2-hour postprandial blood sugar, uric acid, Congo red test, spinal fluid, urinary porphyrins, urinary heavy metals, and bone marrow were within normal limits. Total protein was 8.4 Gm., albumin 4.8 Gm., globulin 3.6 Gm., Kunkelglobulin 5.0 units, electrophoresis (relative per cent): ALB 47.44, A_1 3.85, A_2 8.97, beta 24.36, and gamma 15.38. Chest, cervical spine and skull X-ray films were within normal limits. The thoracic spine showed a slight degree of scoliosis and the lumbar spine revealed degenerative changes with narrowing of joint spaces at L 4 and L 5. An electrocardiogram was within normal limits. Electromyography revealed no evidence of fibrillations of denervation.

Skin biopsy with special stains for amyloid revealed amyloid deposition in and around blood vessel walls compatible with primary amyloidosis. Muscle biopsy revealed groups of small fibers in primary muscle fascicles, in some instances the groups of small fibers replacing whole muscle fascicles. In addition, there were isolated structural changes in some of the medium-sized fibers remaining. Amyloid was distributed widely in the section, being found within and about blood vessels and occasionally in the interstitial spaces between muscle fibers. There was an increase in internal nuclei and endomysial connective tissue. The impression was that the groups of small fibers together with myopathic changes in medium-sized fibers indicated the presence of a neuropathy and a myopathy associated with amyloid deposition and compatible with primary amyloidosis.

The patient was in the hospital for approximately 2 months, during which period there was no significant change in either the subjective or objective manifestations of the condition. He was ambulatory at the time of discharge. Evaluation 13 months later (February 17, 1961) revealed no essential change in his condition, except for increased weakness in the right upper extremity.

SUMMARY

Peripheral neuropathy in the nonfamilial form of primary amyloidosis occurs infrequently. Differentiation from neuropathy of some other origin is difficult unless other systemic manifestations of amyloidosis are present. The diagnosis is frequently made on the basis of an autopsy rather than clinical studies. The duration of the disease is usually 2 to 3 years. Survival for longer periods of time is not common. White patients predominate. Negroes are rarely affected.

(Continued on page 568)

PRESIDENT'S PAGE

DOCTORS AND HOSPITALS

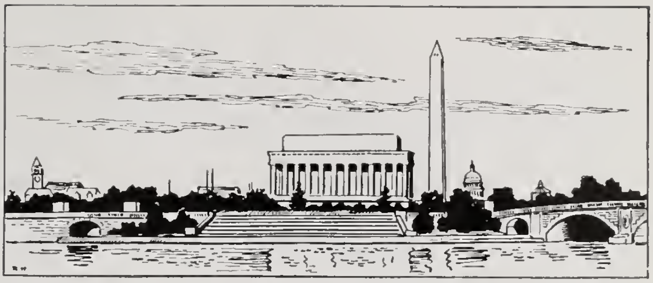
THE SCIENCE OF MEDICINE is constantly reducing the proportion of health care provided outside the hospital. No longer does the doctor work alone with his patient for even a majority of the items of treatment. The complexities of group practice, of team operation, and of highly involved hospital performance are assuming the center of the stage as viewed by the public. Furthermore, this shift in the pattern of practice is the most significant factor in the mounting cost of medical care.

Hospitals, hard pressed by financial need, are finding that one of the most variable and least understood items of cost is the well run training program. They know too that physicians' services, sold as such, are almost the only product which can provide them with a sizable profit. The resulting corporate practice of medicine is opposed and decried by many, but others see it as inevitable and desirable.

Doctors generally believe that quality of care is aided by administrative separation between physicians' services and hospital functions. The separate though coöperative American Medical Association and American Hospital Association are firm evidence for this view. However, doctors and hospitals alike have supported a system under which resident and intern training is financed by the hospital. This has led directly to the extension of the duties of salaried teaching personnel into clinical practice as a source of much needed revenue. Some local hospitals now hire practicing physicians as surgical assistants when interns are not available and charge the patient for their services.

Thus, ever-expanding is the sphere of economic influence affecting patterns of medical practice. It is becoming apparent that to the extent that doctors wish to maintain separation of control of their practices from those of hospitals, it will be necessary for them to assume financial responsibility for all duties in the hospital performed by doctors of medicine. This is clearly an area demanding joint study in organizations of medicine, of hospitals, and of all related teaching groups.

Donald Stubbs



EDITORIALS

". . . WE SHALL DISCIPLINE OURSELVES . . ."*†

There is one area of basic physician responsibility which I feel must be emphasized before this House of Delegates and in the council chambers of each state and county medical society in the Nation. This is the area of self-discipline.

I regard self-discipline as a vital responsibility which we as physicians must exercise vigorously and openly if we are to preserve our free practice of medicine.

Because it is a privilege to practice medicine, we as physicians are duty-bound to keep medical practice free from impurities or flaws. Medicine must not tolerate anything less than the best.

I don't think it will ever be repetitious for the medical profession to restate its creed on this matter. WE SHALL DISCIPLINE OURSELVES.

This statement not only means that we don't want outsiders trying to assume our own responsibilities, but it also means that we pledge our colleagues and our patients that we shall not tolerate anything but the finest quality medical care and the highest standards of professional ethics known to science.

Of course, it is difficult to express a dogmatic philosophy on this vital subject, since ours is an ever-changing, ever-discovering science, and one which cannot be hamstrung by purely traditional restrictions.

To me, the entire question of medical discipline can be summarized thus: We must do everything to encourage progress and knowledge, yet also fight fiercely against regression and stagnation.

New drugs, new therapy and new devices are developed daily, and we must maintain a receptive atmosphere of encouragement for acceptable scientific revolutions.

However, we must guard against the bizarre, the emotionally appealing, and the unscientific. We must also see that medicine in 1961 is practiced with 1961 knowledge—not with the knowledge of 1951, 1941, or 1931.

All of us have learned from experience that much of what we were taught 20 or 30 years ago in medical school is obsolete. However, the philosophy of medicine rarely changes. Although we now use drugs and treatment which were unthought of while we were in school, we still retain our beliefs that the sole purpose of the medical profession is to help mankind . . . to relieve pain . . . to comfort the sick . . . to heal wounds . . . to prevent suffering . . . and to cure disease.

This philosophy must never change. The moment the medical profession regards statistics,

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* Excerpts from the Presidential Address before the opening session of the House of Delegates of the American Medical Association, June 26, 1961, during the 110th Annual Meeting of the Association in New York City.

† Reprinted from J. A. M. A., 1961, 177, 173.

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia

case histories, and drug ingredients as more important than human beings, then it becomes an impersonal machine.

To be specific, what we must concern ourselves with in the matter of self-discipline is improper practice, incompetent practice, and unethical actions of every nature.

Some of you may think that I have been talking as if these were widespread problems. I can assure you that they are not. The percentage of physicians who do not observe the law or the dictates of good conscience is infinitesimal compared with the number of doctors who conscientiously provide the patients with the best possible medical care.

However, that tiny fraction of undisciplined must be excised from the body of medicine, lest it grow like a cancer and thus pollute and corrupt the entire profession.

* * * * *

The self-discipline system, as I see it, is divided into 2 general realms which occasionally overlap: (1) the grievance committee, which handles patient complaints and matters in which the patient has been affected by a doctor's actions; and (2) the disciplinary committee, which is strictly a function of the medical society which protects the public by insuring that physicians live up to self-imposed ideals that set standards of conduct well above the bare minimum required by law.

By far, the most frequent cases involving the grievance committees are those of alleged overcharging. Other complaints by patients include abuse of health insurance, failure to respond to requests for service, and unnecessary service.

The disciplinary committee must concern itself with ethical violations such as advertising, fee splitting, association with cultists or faddists, professional incompetence, overcharging, and abuse of health insurance.

I believe that every state and local medical society should have both a grievance committee and a disciplinary committee, and that members of the society should be willing to serve on both these important groups. The grievance committee acts as an excellent public relations vehicle if it functions properly, and the disciplinary committee insures continued allegiance to those high ideals of medicine which have placed the profession on the pedestal of public esteem.

I realize that few doctors relish the prospect of sitting in judgment on their colleagues, and often think to themselves: "There but for the grace of God sit I." The doctor must, however, accept this responsibility.

Physicians must not be afraid to censure or punish their fellow doctors who are guilty. Anyone sitting on a disciplinary or grievance committee should make a supreme effort to divorce personalities from the inquiry and consider the offense—not the offender. The action—not the man—is the only legitimate interest of these committees, and if the members cannot successfully discharge this responsibility, it is up to the society to replace them with more willing candidates.

Of course, I am not advocating a medical inquisition to ruthlessly slap down every physician called before it. Rather I believe most strongly that grievance and disciplinary committees should be filled only with men who are capable of impartial judgment, men who want to help keep their profession's reputation spotless, and men who possess the human understanding of the difference between obvious guilt and human error.

An important factor in the question of professional self-discipline is the state medical licensure boards.

I have been disturbed at the lack of communication among these boards with the medical societies.

There have been instances of poor practitioners having their licenses revoked in one state and successfully opening up practices in another state.

* * * * *

I feel that the entire self-discipline problem can be solved by the medical profession without any outside assistance or direction. Certainly if we do not fulfill this responsibility to our patients, the public will demand it and we will lose this precious freedom.

I urge this House of Delegates, the Board of Trustees, the state and county medical societies, and the AMA staff to attack the discipline problem by keeping one jump ahead of complaints, anticipating them rather than waiting for them to happen before acting.

LEONARD W. LARSON, M.D.
President, American Medical Association

MENTAL ILLNESS AND HEALTH

In 1955 the Congress passed the Mental Health Study Act, calling for an "objective, thorough and nationwide analysis . . . of the human and economic problems of mental illness . . . ," declaring it to be "the policy of the Congress to promote mental health and to help solve the complex and the interrelated problems posed by mental illness . . ."

Thus was born the Joint Commission on Mental Illness and Health, a study group composed of representatives of 36 organizations, largely but not entirely professional (the American Medical Association was active, for example, but lack of space forbids an enumeration of them all). The Congress provided all but $137,000.00 of the total cost of the project (over $1,500,000.00).

The final report, entitled "Action for Mental Health," has just been issued (Basic Books, Inc., New York City), together with 10 monographs on Special Studies (4 are still in preparation). In it we have what Congress expected—a thorough assessment of the situation and proposals for future improvement.

The problem is impressive in size—542,000 in public mental hospitals, with over 142,000 admissions annually, an annual expenditure of over 850 million dollars a year. Yet this cost is only for the care of patients in those hospitals, who probably represent only a fraction of patients who need care for mental illness, and this sum means only about $4.05 per day per patient!

One cannot summarize all the recommendations, but a few stand out. One is the urgent need for more manpower—physicians, nurses, psychologists and social workers—and training facilities. Another is the need for more and more psychiatric research, basic and applied. Still another is the need for more clinic facilities for the early outpatient care of ambulatory patients and the development of more psychiatric facilities in general hospitals. (Washington has done well in this regard, with George Washington, the Washington Hospital Center, and Sibley provided with such facilities.)

Many other needs, such as the further use of volunteers and scholarship and loan programs, are outlined, but can only be mentioned here.

This comment is provided on the editorial page rather than in the form of a book review because the problem of mental illness, its care, treatment, and prevention, is one of the most serious, pressing and inadequately met problems of our time. The Report should be studied thoughtfully by physicians, legislators, and all who are interested in the public welfare.

W.O.

THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

IN & OUT OF FOCUS

By the Observer

Inside the AMA

Washington physicians have become painfully familiar with newspaper stories about the American Medical Association's political and other nonscientific activities. The impression too often given is that the powerful AMA is opposed to anything which will disturb the status quo.

As informed members know, this is a distortion of the facts. Unfortunately a majority of physicians have little time or inclination to read articles, reports and editorials on controversial medical issues appearing in their journals. Not that they would grumble less about the AMA's poor press relations if they had, but at least they would have a more intelligent basis for their criticism.

The following observations are a modest attempt to enlist the interest of readers of this column in what your Observer hopes is an objective appraisal of the AMA's leadership, its organizational structure, and its activities in the nonscientific field. Parenthetically, the latter is only a small segment of the overall activity of the Association; nevertheless, it is that which is very much in the limelight at the present time.

Critics make much of the fact that the AMA is run by a "hierarchy" in Chicago. The fact is that the day-to-day conduct of the Association's affairs is in the hands of a full-time salaried staff. *Time Magazine* recently correctly listed as the top 4 men on this staff Dr. F. J. L. Blasingame, Executive Vice President; Dr. Ernest B. Howard, Assistant Executive Vice President; Mr. C. Joseph Stetler, General Counsel and Director, Legal and Socio-Economic Division; and Mr. Leo E. Brown, Director, Communications Division.

Each of the last 3 is under the direction of Dr. Blasingame and has his special assignment. *Time* states that Dr. Howard is the "single most powerful individual" at 535 North Dearborn Street. In your Observer's opinion, *Time* is wrong. "Bing" Blasingame is, and will continue to be, head man. But Dr. Howard, an intense man, is a valuable aide and a vigorous crusader for the policies of the Association. He and Mr. Stetler spearhead the Association's legislative program. Mr. Brown, as indicated, is the public relations expert, and a good one too. Much of the complained of "poor publicity" cannot be laid at his door, for he is not responsible for the policies of the organization which are most severely criticized.

Your Observer agrees with *Time* that the public picture of the AMA is largely formed by these men. However, their activities are subject to scrutiny and approval by the 9-member Board of Trustees elected by the House of

Delegates. By and large, the Board's membership has consisted of men who have been successful in medical practice, having more or less talent as medical leaders. It is fair to state that, as in all such bodies, the Board depends for its effectiveness upon the minority of its membership.

In recent years, younger men have been elected to the Board. An example is Dr. Hugh H. Hussey, who for a number of years was a delegate from the District Medical Society to the AMA and who this year became Chairman of the AMA's Board of Trustees. His extraordinary abilities are widely known, and his service on the Board for the past several years has won much favorable comment. He can be counted on as Chairman to give the Board steady and able guidance.

The headquarters staff is not only accountable to the Board but ultimately to the House of Delegates. The House, which this year consisted of 188 delegates, meets twice a year. Problems of all sorts relating to medicine are presented to it in the form of reports and resolutions for its consideration. These are disposed of with dispatch by one of the most efficient bodies of its kind in any professional organization.

Reports and resolutions follow a set course. At the opening session of the House, reports are presented by AMA officials and resolutions are introduced by members of the state delegations sponsoring them, only the resolved portions being read. Both are referred to the proper Reference Committees, which hear testimony from those in favor or opposed to their adoption. Following hearings, Committees submit their recommendations to the House. If adopted, they become the policy of the Association, a guide to its membership, or establish the Association's position on matters of more or less importance.

There is no way of knowing how many delegates in the House have been elected by their organizations for sentimental reasons. If sentiment is involved in a delegate's election, he is often elderly and well-heeled and has served his state and county medical societies over many years. State medical societies have been known to pay slight attention to the choice of their delegates, being unaware of the importance of the office. Generally speaking, however, members of the House are capable, diligent, and take their assignments seriously. Not a few would stand out in any company.

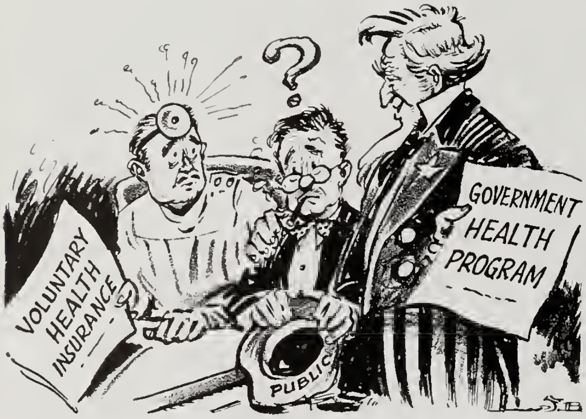
The Medical Society of the District of Columbia is unique. Although technically it is a state medical society, it is organized along the lines of a large county medical organization. Delegates are therefore elected directly by the membership. In nearly all state medical societies, delegates to the AMA are chosen by the state's house of delegates, the general membership having no vote in the matter.

Members of the District Medical Society need not be told that Drs. Raymond T. Holden and Ralph Caulk, who at present are delegates to the AMA, have made a fine record in the House. Both have served on important Reference Committees and have shown unusual qualities of leadership.

Views of the majority of delegates in the House at the present time might properly be described as right of center. They are therefore responsible for the current policies of the AMA. A sizable minority, which includes the delegates representing the District Medical Society, belong to the more liberal group, which is slowly increasing in number.

Differences of opinion within the House are not uncommon. On occasion, there have been bitter exchanges, especially when "free choice" or "third party" issues are up for consideration. All in all, the House is a peaceful body, in fact too much so at times to hold the interest of delegates.

Not all physicians are happy with the House's performance. In fact, there are those on the far right who are outspoken in their criticism of the AMA's lack of aggressiveness in combating efforts to "socialize" medicine and have organized for the purpose of doing battle with opponents of "free enterprise." Examples are the Association of American Physicians and Surgeons and the recently organized National Physicians' Guilds, Inc. Both insist on their loyalty to the AMA but believe they are in a position to do what the AMA cannot and is not organized to do. Whether this prompted the organization last month of the American Medical Political Action Committee, your Observer does not know. At any rate, this Committee, which has the blessing of the AMA, must have come into being for a good reason. This explanation seems as plausible as any.



"I . . . and higher taxes . . . will take care of him"

On the far left, the Physicians' Forum, with a small but once vocal membership, advocates compulsory health insurance. The Forum has been in existence for a number of years. The enthusiasm it once generated among its membership seems to have waned.

Surprisingly, these organizations have not weakened the AMA. Their predecessors, and there have been a number, have flourished for a short time and disappeared or are in the doldrums. The AMA still remains, as it has been for many years, the largest and most powerful professional organization in this or any other country.

The President of the AMA is its front man. He, like members of the Board of Trustees, is elected by the House of Delegates. This year's President, Dr. Leonard W. Larson, is a modest, straightforward, courageous man, who made a fine record as one of the more realistic members of the House of Delegates. Subsequently, he served with distinction as a member of the Board of Trustees. However, as in the case of all Presidents, his term is only for 1 year, and, like his predecessors, Dr. Larson is dependent to a large extent on the headquarters staff for the success of his administration.

So much for the leadership and organizational structure of the Association. As stated in the beginning, District physicians generally have been disturbed by the poor publicity which the AMA often receives. If properly informed, they would discover that much of it is unavoidable because of the Association's involvement in the controversy over methods of providing medical care. On the other hand, they find refusal of its representatives to admit the Association's past mistakes embarrassing. Belligerency on occasion has not won supporters in or outside the profession. Nevertheless, "proof of the pudding is in the eating." The Association has so far won all its major battles against proponents of a Government system of medical care for the general population.

It remains to be seen if the AMA's policies in this area will pay off in the long run. Our Medical Society stands with those who believe that Government intervention is inevitable unless voluntary health insurance on a national scale is made to work. It is also of the belief that the hour is already late and more vigorous leadership in this field is needed. AMA leaders, on the other hand, are apparently not convinced of the urgency of the situation. Time will tell who is right.

★

Brand vs. Generic Names

On December 7, 1959, the Senate Subcommittee on Antitrust and Monopoly, of which Senator Estes Kefauver is the Chairman, began its investigation of the prescription drug industry; the purpose: to obtain the enactment of restrictive regulatory legislation.

By the fall of 1960 there had been 39 days of testimony, the typewritten transcript of which ran 42 volumes and some 10,000 pages. At the time this is written the hearings are still in progress, increasing heat being generated by the opposing witnesses.

In May 1961 the Pharmaceutical Manufacturers Association prepared for limited distribution a comprehensive review of the highlights of the hearings from its point of view. The following statement appears in a "chapter" entitled "Brand vs. Generic Name Prescribing":

> "The medical practice of prescribing ethical drugs by the manufacturer's brand name rather than by the common or nonproprietary name, often called in the trade the generic name, has been a principal target of the subcommittee chairman and majority staff. Fortified by the testimony of early committee witnesses, the investigators argued that if doctors prescribed drugs by generic names, the pharmacist could fill prescriptions from a number of lower priced 'equivalents.' These, they claimed, are as good as the trade-marked product. Generic prescribing, the investigators contended, would stimulate competition which, in turn, would force the major trade-name manufacturers to lower their prices."

The drug industry, the report continues, has been criticized for expenditures for advertising, detailing and direct mail in alleged efforts to "brainwash" doctors into prescribing trade-name drugs.

Naturally, spokesmen for the industry have not taken these charges lying down. Evidence was introduced to prove that "broad-scale generic prescribing would be unsafe" and that a large number of generic products are "substandard." Legislation which would remove from the physician the right to prescribe what he believed in the best interest of his patients was challenged. Defended was the industry's "informational program" which brought "new drug knowledge to doctors in the shortest possible time."

Many witnesses were heard, among them physicians who testified for and against the use of brand as opposed to generic names.

Dr. Philip S. Hench, Nobel Prize-winner, testified:

> "It is easier for the physician and the patients if the medicines all had the same name but I can see a company that puts out a very special effort into a product in order to make cortisone by the very best way has the right to say that this is cortisone Merck and we are going to call it Cortone, just like some of the silver is stamped Sterling which means that they have an idea that even though it is silver, it is better made, and I have no objection to that."

Another witness, Dr. Russell L. Cecil, Consulting Medical Director of The Arthritis and Rheumatism Foundation, told the Committee:

> "Naturally when you are prescribing for a patient you rather like to use the one that you know about and are familiar with and have trust and confidence in.
>
> "You know that it has been well made and you see something under the original chemical name such as prednisone or prednisolone, why you don't know about the manufacture of it or how good it is. You know the trade name generally guarantees a good product."

Taking cognizance of the hearings the Texas delegation to the AMA's House of Delegates meeting in New York last June introduced a resolution in opposition to the compulsory use of generic names in prescribing drugs. Points made in its resolution were that it was wrong to "deny the patient the benefit of the physician's best judgment."

"All drugs containing the same active ingredients are not identical; drugs having the same active ingredients and subject to the same standards may vary in more than 24 different respects and still be entitled to share the same generic name."

Deplored was the discouraging effect the curb on the use of trade names would have on scientific research by manufacturers of pharmaceuticals. The House was urged to go on record in opposition to "legislative and administrative mandates which would compel physicians to prescribe drugs, or require pharmaceuticals to be sold, by generic name only."

Upon recommendation of the Reference Committee to which the resolution was referred the House voted for its adoptoin.

Subsequently, Dr. Hugh H. Hussey, Chairman of the AMA's Board of Trustees, testified: before the Kefauver Subcommittee.

"It is the policy of the AMA that the early adoption of a nonproprietary name should be encouraged to facilitate understanding of the properties and proper usage of the drug. It is also our policy that the nonproprietary or generic name should be as simple as possible and that chemically related drugs, used within a given therapeutic area, should preserve some relationship in their nonproprietary names.

"In order to improve and streamline the naming process, the AMA and the U. S. Pharmacopoeia recently formulated a joint program for the adoption of nonproprietary names. The objectives of this program are to facilitate the selection of suitable nonproprietary names for drugs and to encourage the use of such names wherever indicated in labeling, in advertising, as titles in the official compendia, and in the scientific literature. . . .

"The AMA believes that the system of adopting nonproprietary or generic names for drugs has been reasonably effective in the past, and that the new joint Nomenclature Committee will make it even more effective and expeditious in the future. Further, the close coöperation of the AMA and USP in this program will greatly increase the use of such names and eliminate any confusion or possibility of confusion that may exist at present.

". . . Physicians will adopt and use nonproprietary names for drugs only when they are convinced that the use of such names will facilitate and improve their practice of medicine. . . .

". . . Although physicians do not want useless drugs cluttering up the practice of medicine and although it is difficult for physicians to become familiar with all of the drugs which have become available during the past two or three decades, we are convinced that the Food and Drug Administration cannot solve these problems for us. . . .

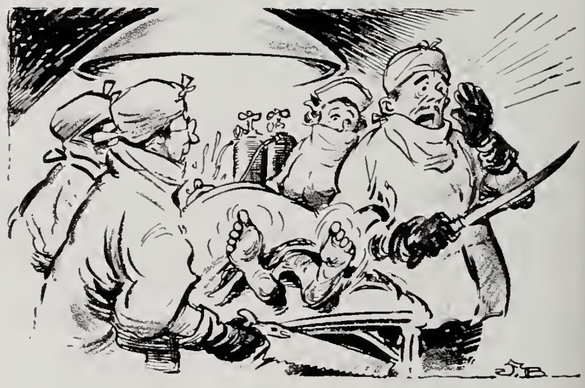
" . . . It is well to remember that we are talking about products which will be consumed only if they are prescribed by a physician. Hence, his training and experience, his continually expanding knowledge of drug therapy, and his professional responsibility to his patient act as powerful barriers to the sale of useless drugs. Secondary barriers exist in the adverse economic results which would generally follow for a pharmaceutical manufacturer who attempted to market a useless prescription drug. . . .

". . . A physician can be told many things about a drug, including its chemistry, its mode of action, and, to some extent, its toxic properties. But he must judge its efficacy. If this precise usage of the word 'efficacy' is kept in mind, the consideration of legislation which would request that an administrative agency of Government determine the efficacy of drugs can proceed more fruitfully."

As stated in the beginning, the hearings are still in progress. Whether any regulatory legislation will be enacted in this session seems doubtful.

Suit-conscious Doctors

What effect has the increase in malpractice suits in recent years had on medical practice? In seeking an answer to this question, Boston University Law-Medicine Research Institute early in the year made a survey of 10 per cent of the general practitioners and specialists in Massachusetts. Upon its completion, Professor William J. Curran, Director of the Institute, announced the results.



"Is there a lawyer in the house?"

The "unfortunate" findings in the study, as reported in the March 1961 number of *The Doctor & The Law*, a monthly medico-legal newsletter, were:

"1. Many physicians reported that they are increasingly reluctant to accept certain types of patients because of their propensity to institute malpractice suits, for example those who have previously sued doctors, those who shop around from one doctor to another, alcoholics and bad credit risks.

2. Many general practitioners are more careful in limiting the scope of their practice, such as elimination of minor surgery, refusal to handle therapeutic X-ray or fracture cases, avoidance of using some of the newer drugs and technics.

3. The physicians surveyed reported an increased use of X-ray and laboratory analyses and an increase in the use of consultants, especially in those cases in which the end result is apt to be poor."

On the favorable side were the following benefits:

"1. The physician's interest has been increased in keeping better medical records and in putting more things in writing. For example, he is now more careful to obtain consent forms for surgery and autopsy; he gives his patients written prescriptions instead of phoning the druggist; he maintains more detailed histories and treatment records, especially on uncoöperative patients.

"2. The physician is also beginning to realize that well-informed, satisfied patients seldom sue. They are therefore taking more time to fully explain to the patient and his family the nature of the illness and the method of treatment he intends to use."

Commenting on these findings *The New England Journal of Medicine* editorialized:

"It is apparent that the lawsuit menace has favored conservatism, caution and care in medical practice as well as adding to its cost. It is unfortunate that any benefits derived should have had to come through a medium so sordid."

★

The Aging Driver

"We do not say," write Edmond G. Zimmerer, M.D., and Helene Deming in the June 1961 issue of *New Medical Materia*, "that a driver should not drive when he reaches a certain age. We say that he must recognize his limitations because, as we grow older, we change. Traffic conditions change also, and these two factors demand more alertness and skill."

"Most experienced senior drivers can retain their confidence behind the wheel" unless they have suffered severe disabilities. Even then they may have difficulties involving:

"1. Turning movements. [Example: Stiffness which can make it hard for the aging driver to turn his head when backing up.]

"2. Questions of right-of-way.

"3. Situations in which a high degree of perception, problem-solving ability, and immediate reactions are required."

"Some young whippersnapper put that thing in front of my car!"

The authors urge the need for a planned program to help the rapidly increasing number of aging drivers adjust to their limitations. In this the family physician can be of help by warning his older patients of the bad effects certain medicines may have on their driving. He should, of course, advise them of any condition which might affect their driving proficiency. Where cessation of driving is advisable he should insist upon it. This is most difficult even where the hazards are self-evident. The patient often brings heavy pressure to bear on his doctor for fear he will be removed from the highways.

Suggested by Dr. Zimmerer and Miss Deming is the need for traffic and safety courses and clinics where the older driver can go voluntarily "to have an appraisal made of his driving performance."

Motor vehicle administrators. it is stated, are of the opinion that the driver's performance in traffic, not his age, should be the determining factor in his fitness to drive.

Longevity of Our Presidents

What effect do the demands on the President of the United States have on his life expectancy? According to the *Statistical Bulletin of the Metropolitan Life Insurance Company*, the longevity record has been so varied from one period in our history to another it is impossible to draw any definite conclusions.

TABLE 1

Longevity of Deceased Presidents of the United States

Expectation of Life at Time of Inauguration Compared with the Number of Years Actually Lived After Inauguration

President	Age at Inauguration	Expected Years of Life at Inauguration*	Years of Life Actually Lived After Inauguration
George Washington	57	15.3	10.6
John Adams	61	13.0	29.3
Thomas Jefferson	57	15.3	25.3
James Madison	57	15.3	27.3
James Monroe	58	14.7	14.3
John Quincy Adams	57	15.3	23.0
Andrew Jackson	61	13.0	16.3
Martin Van Buren	54	17.1	25.4
William H. Harrison†	68	9.4	0.1
John Tyler	51	18.9	21.2
James K. Polk	49	20.2	4.3
Zachary Taylor	64	11.3	1.4
Millard Fillmore	50	19.5	23.7
Franklin Pierce	48	20.8	16.6
James Buchanan	65	10.8	11.3
Abraham Lincoln‡	52	17.7	4.1
Andrew Johnson	56	15.4	10.3
Ulysses S. Grant	46	21.4	16.4
Rutherford B. Hayes	54	16.5	15.9
James A. Garfield‡	49	19.5	0.6
Chester A. Arthur	50	18.8	5.4
Grover Cleveland	47	22.7	23.3
Benjamin Harrison	55	17.6	12.0
William McKinley‡	54	18.1	4.5
Theodore Roosevelt	42	26.3	17.3
William H. Taft	51	19.7	21.0
Woodrow Wilson	56	16.4	10.9
Warren G. Harding†	55	18.4	2.4
Calvin Coolidge	51	21.3	9.4
Franklin D. Roosevelt†	51	20.8	12.1

* According to mortality conditions prevailing about the time of inauguration.

† Died during tenure.

‡ Assassinated.

It will be noted in Table 1 that the youngest President to die was James A. Garfield. He was 49 years old when felled by an assassin's bullet. His death, of course, could not be taken into account statistically in evaluating life expectancy.

Among the youngest Presidents to die of natural causes were James K. Polk at 53 and Chester A. Arthur at 55. The oldest President at the time of death was John Adams, who lived to be 90 years of age, or 16 years beyond his expectation of life at inauguration. Life expectancy of Presidents from George Washington to John Tyler was 72.8 years. Their actual age at death was 77.4 years. Thomas Jefferson lived to be 83, or 11 years later than might be expected on the basis of mortality prevailing at the time. James Madison also exceeded his life expectancy when he lived to the age of 85.

Since the Civil War only 2 Presidents, Grover Cleveland and William H. Taft, outlived the expectancy of life at inauguration. Cleveland was 47 at the time he became President, with a life expectancy of 22.7 years. He actually exceeded his life expectancy by only a fraction of a year. Taft was 51 when inaugurated, his life expectancy was 19.7, and he actually lived 21 years.

Presidents from Lincoln to Franklin Roosevelt lived an average of 8 years less than expected. Three Presidents were assassinated while in office—Lincoln, Garfield and McKinley. However, as the *Bulletin* points out, even if these were omitted from the record the actual years lived by the Presidents of the post-Civil War period still averaged 6.6 years less than expected at their inauguration.

Much has been written in recent years about the heavy burdens of the Presidency and what a man-killing job it is. However, for the first time in three-quarters of a century there were 3 ex-Presidents alive at the time John F. Kennedy was inaugurated (Table 2). President Dwight D. Eisenhower had reached the age of 3 score and

10 when he relinquished the reins of his office; Harry S. Truman was 76 years of age, and Herbert C. Hoover had celebrated his eighty-sixth birthday.

One must agree with the *Bulletin* that despite the increasing burdens of the office its statistical information does not prove conclusively that the Presidency shortens life.

TABLE 2

Current Age of Presidents of the United States

President	Age at Inauguration	Current Age*
Herbert C. Hoover	54	86
Harry S. Truman	60	76
Dwight D. Eisenhower	62	70
John F. Kennedy	43	43

* As of January 1961.

T. W.

REPORT OF THE DELEGATES TO THE AMA HOUSE OF DELEGATES

During its most recent meeting in New York City, June 25–30, the House of Delegates considered and acted upon 115 resolutions and 28 reports for a near record. That many of the resolutions introduced from widely separated areas of the country were remarkably similar in content could be construed as an indication of the similarity in the thinking of physicians throughout the Nation, particularly on the subjects of osteopathy, medical discipline, communications or public relations, surgical assistants, drug legislation, general practice residencies, and poliomyelitis vaccine, which were a few of the subjects touched on by the resolutions and reports.

Dr. George M. Fister, of Ogden, Utah, a member of the AMA Board of Trustees and previously a member of the House of Delegates, was named President-elect of the Association. Dr. Fister will become President at the June 1962 Annual Meeting in Chicago, succeeding Dr. Leonard W. Larson, of Bismarck, North Dakota, who assumed office at the Tuesday night inaugural ceremony in New York.

Osteopathy

The House agreed with the intent of the report of the Judicial Council and several resolutions on the subject of osteopathy but adopted a definite AMA policy, which in brief is as follows:

> "There cannot be two distinct sciences of medicine or two different yet equally valid systems of medical practice, and there can never be an ethical relationship between a doctor of medicine and a cultist, that is, one who practices a system of healing not founded on a scientific basis. However, recognition should be given to the transition presently occurring in osteopathy whereby many of those practicing osteopathic medicine are attempting to give their patients scientific medical care. This transition should be encouraged so as to expedite the evolution, and the AMA, in view of the transition of osteopathy into osteopathic medicine, the remodeling of the curricula of schools of osteopathy after those of schools of medicine, the reliance of osteopaths on medical literature, etc., should reappraise its application of policy regarding relationships with doctors of medicine. Policy should now be applied at the state level, not at the national level, as heretofore, on the basis that if the individual doctor of osteopathy bases his practice on the same scientific principles as those adhered to by the AMA, voluntary professional relationships with him should not be deemed unethical."

Medical Discipline

In his opening address President Larson stressed the importance and urgency of strong disciplinary action within the profession. Subsequently the House adopted almost verbatim the conclusions and recommendations of the special Medical Disciplinary Committee, whose functions will now be carried on by the Judicial Council. Among the recommendations of the Medical Disciplinary Committee adopted were the following:

—That "the bylaws of the American Medical Association be changed to confer original jurisdiction on the Association to suspend or revoke the AMA membership of a physician guilty of a violation of the Principles of Medical Ethics or the ethical policy of the American Medical Association regardless of whether action has been taken against him at local level."

—That the AMA encourage and urge each state association to report annually to the American Medical Association "all major disciplinary actions taken within its jurisdiction during the preceding calendar year."

—That state and county medical societies be urged to utilize grievance committees as "grand juries" to initiate action against an offender so as to obviate the necessity of making an individual member of a medical society complain against a fellow member.

—That each medical school develop and present a required course in ethics and socioeconomic principles, and that each state board of medical examiners include questions on ethics and proper socioeconomic practices in all examinations for license.

The report concluded with a recommendation that "American medicine at the national, state and local level maintain an active, aggressive and continuing interest in medical disciplinary matters so that, by a demonstration of good faith, medicine will be permitted to continue to discipline its own members when necessary."

Communications

For the benefit of the uninitiated, the Communications Division of the AMA has to do with public relations. As a substitute for several resolutions pertaining to the AMA's public relations program, the House adopted a substitute resolution directing the Speaker of the House of Delegates to name 7 elected members of the House as a special committee "to study and continually advise the Board of Trustees on the broad planning and coördination of all phases of communications of the American Medical Association, so that the public and the members of the medical profession are properly and adequately advised of the policies and concern of the medical profession with respect to all phases and aspects of medical care for all people."

The House agreed with a reference committee opinion that "we have a very adequate Division within the AMA capable of implementing any program of communications." The approved committee report also stated that "the Communications Division of the AMA needs the active support and coöperation of the House and of all members of the Association."

Surgical Assistants

In considering a Board of Trustees' report and 2 resolutions on the subject of surgical assistant's fees, the House approved the following 5 basic principles developed by the Judicial Council and the Council on Medical Service:

"1. Each member of the AMA is expected to observe the Principles of Medical Ethics in every aspect of his professional practice.

2. Each doctor engaged in the care of the patient is entitled to compensation commensurate with the value of the services he has personally rendered.

3. No doctor should bill or be paid for a service which he does not perform; mere referral does not constitute a professional service for which a professional charge should be made or for which a fee may be ethically paid or received.

4. It is ethically permissible for a surgeon to employ other physicians to assist him in the performance of a surgical procedure and to pay a reasonable amount for such assistance.

This principle applies whether or not an assisting physician is the referring doctor and whether he is on a per-case or full-time basis. The controlling factor is the status of the assisting physician. If the practice is a subterfuge to split fees or to divide an insurance benefit, or if the physician is not actually employed and used as a bona fide assistant, then the practice is contrary to ethical principles.

5. Under all other circumstances where services are rendered by more than one physician, each physician should submit his own bill to the patient and be compensated separately."

Efficacy of Drugs

The House strongly endorsed a Board of Trustees' report which pointed out the problems that would result from amending the Food, Drug and Cosmetic Act to authorize the Food and Drug Administration to determine the efficacy, as well as the safety, of a prescription drug prior to the approval of a new drug application. AMA opposed such legislation, now before the Kefauver Committee, on the basis that "a decision with respect to the effectiveness of drugs is dependent upon extended research, experimentation and usage." The determination of the safety of drugs was not at issue as the FDA already has the authority necessary to determine that in which the AMA concurs.

The House agreed that vesting authority in the Food and Drug Administration to determine efficacy of drugs would operate to limit research, the marketing of drugs and the exercise of discretion by the medical profession and declared that "the marketing of a relatively useless drug is infinitely less serious than would be the arbitrary exclusion from the market of a drug that might have been life-saving for many persons."

General Practice Residencies

Eight resolutions were introduced on the subject of creating new 2-year residency training programs in general practice. The House agreed that there appears to be a need for such programs for those individuals who desire more experience in obstetrics and surgery than may be available in the currently existing Family Practice Program. It approved a substitute resolution directing the Council on Medical Education and Hospitals to consider for approval other 2-year programs in general practice which incorporate experience in obstetrics and surgery. The Council will review these programs on the basis of their individual merits and conduct a long-range evaluation of the new programs as well as the previously established Family Practice Programs.

Relations with Other Health Professions and Services

The House considered a Board report and 12 resolutions dealing with various aspects of medicine's relationships with allied health professions and services, including optometry, and accepted a reference committee suggestion for establishment of a new Commission to Coördinate the Relationships of Medicine with Allied Health Professions and Services. The Commission will be composed of 7 members appointed by the Speaker of the House. Subcommittees, composed of from 3 to 5 members selected by the Commission from lists of names submitted by the scientific sections, will consider problems in specific areas. The Commission will correlate and catalogue the reports of the subcommittees and will act as liaison agent between the subcommittees and those AMA Councils where there may be overlapping interests.

Polio Vaccine

The House approved a report by the Council on Drugs on the present status of poliomyelitis vaccination in the United States and urged that it be made available to all physicians through the most effective communications media. The report clearly outlines procedures recommended for implementation of mass vaccination with the new oral vaccine when it becomes available. The House complimented the Council on its "clear and succinct statement on the initiation of the new campaign which will be needed to promote the new vaccine." The House agreed that the report provides the practicing physician with a reliable series of answers to the many questions which will arise during the change-over from Salk vaccine to oral vaccine. The report emphasizes, however, that "physicians should encourage, support and extend the use of Salk vaccine on the widest possible scale at least until the oral polio-virus vaccines currently under development and clinical trial become available."

The House further urged that an immunization campaign against both tetanus and influenza be strongly supported.

Miscellaneous Actions

The House reaffirmed its support of the Kerr-Mills program for the needy and near-needy aged and its opposition to the King-Anderson Bill.

It also reaffirmed the Association's opposition to compulsory inclusion of physicians under the Social Security system.

Legislative and administrative mandates which would compel physicians to prescribe drugs or require pharmaceuticals to be sold by generic names only were opposed. This should not be interpreted as opposition to the use of generic names of drugs but on the basis that trade names sometimes are useful in the selection of particular drugs for particular situations. The opposition was directed at the required use of *only* generic names.

The House approved the "Guides to Physician Relationships with Medical Care Plans" with certain changes. These guides are recommended to the Medical Society's Committee on Medical Care for its guidance.

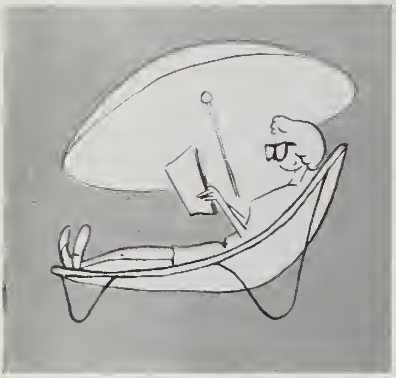
It directed the Board of Trustees to use its good judgment and sound discretion in the selection of a carrier for the national group disability insurance program to be initiated for members of the Association. The Board had submitted a detailed report of its efforts in this line and had stated that it could not at this time develop a group annuity or retirement plan for members of the AMA which would have any advantage over a similar type of plan a member might secure as an individual. If in the future a tax shelter for retirement plans for the self-employed should be approved by Congress then group plans would be advantageous and the Board stated it would seriously reconsider the matter.

Of further immediate interest, the House agreed

(Continued on page 568)

DOCTOR:

THESE COULD BE YOUR PATIENTS



No one would ever know I had a mastectomy. I'm so pleased my Doctor gave me a copy of **"Help Yourself to Recovery"**

I'm glad I learned how to irrigate properly from my Doctor and that nice book, **"Care of Your Colostomy"**

Copies of "Help Yourself to Recovery" and "Care of Your Colostomy" may be obtained for your patients free of charge . . .

CALL OR WRITE

American Cancer Society

District of Columbia Division

810 18th Street, N.W.
EXecutive 3-3690

Panel Discussion

PSYCHOLOGICAL FACTORS IN DOCTOR-PATIENT RELATIONS

MODERATOR:
HENRY P. LAUGHLIN, M.D.
President, The Medical Council of the Washington Metropolitan Area

PANELISTS:
LEO H. BARTEMEIER, M.D.
Medical Director, Seton Psychiatric Institute

THE FACT THAT SOME PATIENTS drift from doctor to doctor draws our attention to something amiss in our relations with each other. The unconventional behavior of these patients may be compared, for example, to the behavior disorders of children. The clinical investigations of children who manifest these disorders almost invariably disclose that their socially unacceptable behavior is a product of their discontent and dissatisfaction in their relations with their parents. If the treatment of their parents succeeds in modifying their attitudes toward their children their behavior disorders are resolved. If we can accept the fact that as physicians we function as surrogate parents in the care of the sick, we may see that we have been partially responsible for the drifting of patients from one doctor to another.

ACKNOWLEDGMENT

This is the sixth in a series of talks given at the Forum on General Problems in Medical Practice, held at the Hotel Statler-Hilton in Washington, D. C., October 29, 1960, under the auspices of the Medical Council of the Washington Metropolitan Area. Host: Peoples Drug Stores, Inc. Reprints may be obtained upon request from the Medical Society of the District of Columbia, 1718 M Street, N.W., Washington 6, D. C.

As members of a medical family we have the responsibility of maintaining and strengthening our relations with one another. Each of us has the ethical obligation to ascertain whether we are free to accept any patient who is unknown to us. We have the necessity to ask him whether he is in the care of another physician or how recently he has visited another physician and whether he has discharged him. If each of us were to assume this obligation the patients who wander from one physician to another could no longer do so and our relations with each other would be improved.

It has not been emphasized sufficiently that in the practice of our profession our obligations to our patients simultaneously include our obligations to our colleagues in the Medical Society to which we belong. We cannot practice in isolation from one another.

Whenever we undertake the treatment of a patient we also become involved with the members of the family. The illness of one member affects the health of the other members of the household. Although we know this we tend to think that the patient is our sole consideration. We do not see him as inseparable from his wife and children, his parents and other close relatives with whom he is bound by the strongest emotional ties. Our experience teaches us that his family may implement our efforts to heal him or that they may retard or even prevent his recovery. No sick person is influenced solely by his physician. Every patient is also influenced by his family. They often become overly anxious and unintentionally intensify his illness. If he does not improve as quickly as they wish, they may question our competence, our interest or our understanding of his sickness. They call upon us for information, for advice and for reassurance. They may interfere so seriously with our treatment that unless we separate the patient from them by hospitalizing him we cannot treat him effectively. The amount of our professional time consumed in behalf of the relatives may far exceed that which is needed for the patient. In situations like these we are involved in a constellation of illness that may tax our patience, our charity, and perhaps our devotion to our profession.

Regardless of whether we are specialists or general practitioners we are always family physicians. The family surrounding the patient requires our services to sustain its emotional equilibrium through the crisis of the acute illness of one of its members. Both the patient and the family invest us with authority and often with omniscience and omnipotence. They turn to us for information, for suggestions, for advice, and reassurance, and all physicians practice psychotherapy whether or not they are aware of it.

In so far as we have retained our humanity and have respect for the personal dignity of our patients, and have regard for their feelings and the feelings of their families, I think we provide an optimum quality of professional care. We always need to understand the person who has a disease as well as to possess knowledge of disease itself.

The complaints against physicians for their lack of personal interest and consideration for the feelings of their patients from people in all walks of life demand the return of humanism to the practice of medicine. The recent discoveries in psychiatry which have established this specialty as a basic science have evoked similar and justifiable criticisms.

Dr. Francis Peabody, who was Professor of Medicine at Harvard, will always be remembered for having lectured to his medical students that "the care of the patient begins by caring *for* the patient." He was a great humanist who was sensitive to the psychological changes which take place in all persons as specific aspects of illness.

For a number of years it has become increasingly evident that a considerable percentage of medical practice consists of patients whose physical symptoms are the manifestations of emotional disorders or the defenses against mental illnesses. Although we always have the responsibility of relieving suffering by prescribing medicines, our knowledge about these functional illnesses is such that we can no longer remain satisfied with a palliative kind of medical care. We need to explain to the patients of whom I am speaking that the medicine we are prescribing may bring temporary relief but is in no sense curative. We need to learn the etiology of the symptoms which appear to represent difficulties with their living with others.

It does not behoove the dignity of our profession nor our own self respect to tell a person who has been suffering for some time and who has finally decided to consult us that there is nothing wrong with him. Every patient who has been given such information has been insulted. A physician may say that he remains unable to understand the cause of the symptoms and that he needs to continue the examinations. In some instances the pathological process giving rise to symptoms has not advanced sufficiently to be detected. To conclude that any patient's illness must be functional in nature because no organic pathology has been discovered is not in keeping with adequate clinical investigation. The examination is incomplete until the patient is studied from the point of view of his life situation and what stresses and dislocations have occurred in his relations with other persons with whom he lives and works and plays.

We need to discuss, for example, what was happening in his life at the time that his illness first appeared. Under what circumstances did the onset of his symptoms take place? This method investigates the person who manifests the illness in contrast to the outdated and outmoded orientation which was more concerned with disease than with human beings.

All wise physicians have known the basic importance of examining their patients in the light of their habits, dispositions, their manner of life, as well as the possible organic changes which they may have developed. Many physicians who have not had the benefit of the kind of medical education that is currently evolving have had to rely upon their intuition. Intuition is not an exact instrument and it behooves us to permit our patients to tell us what they know about themselves, to ask them what they have thought about the nature of their sickness. We need to believe them in the same way that we would wish to be trusted were we in their place. We need, above all, to learn to listen to them, to ask questions, and to recognize that we will probably never know as much about any of our patients as they know about themselves. Additional and often valuable information can be provided by their immediate families.

During the care of all patients and their families we become more effective if we maintain some awareness of what we ourselves are saying and how we are behaving. Every patient watches us very closely, is especially sensitive to our feelings, which we manifest more importantly through our tone of voice, our general manner, our gestures and other nonverbal forms of communication. We reveal our feelings in ways which prevent us from concealing them. It is impossible for us to like every patient, and when we dislike someone it is always possible that it is because of something we dislike within ourselves; or feeling some dislike may stem from the fact that the patient reminds us of a brother or sister whom we hated in our childhood because of envy, jealousy, or other reasons. If, however, we are unable to overcome our dislike for a patient it is advisable that we refer him to one of our colleagues. Medical care is always more effective when the patient and the physician can work well together.

The keystone in the arch of the doctor-patient relationship is the patient's positive feelings toward his physician. Sickness renders people partially or completely incapacitated and dependent on others. There is the additional fact that human beings at the time of birth are the most helpless of all living creatures, and that through the first 15 years of life they continue to be dependent upon their parents. The sick person, unable to heal himself, places himself in our care. He looks to us to relieve him and to restore him. And because of his belief in our wisdom he often expects a miraculous cure.

QUESTIONS AND ANSWERS—DR. BARTEMEIER

Q. Where can doctors learn more about the psychological factors in doctor-patient relations?

A. Any number of training programs are being conducted by individual physicians or by groups of physicians functioning as faculties for these programs. The Baltimore Psychoanalytic Institute, in coöperation with The Psychiatric Institute of The University of Maryland, has provided a number of training programs of several days' duration for family physicians, for internists and for pediatricians. The Executive Secretaries of the State Medical Associations can usually provide specific information.

Q. How do you transfer a patient whom you don't like?

A. I have found it helpful to speak frankly with such patients and point out the fact that not all persons can work together to the best advantage in a one-to-one relation and that another physician whom I can recommend would probably be more helpful to him. If the patient then prefers to continue in my care I must recognize that the patient always has the right to select his own physician.

Q. How does the physician react when his new patient speaks against his previous doctor?

A. The ethical reaction is to avoid reacting with one's feelings and instead to listen with the hope of understanding. If, after listening, one can only conclude that his accusations are not justifiable, one can naturally expect the patient to develop the same reactions toward him. During the years of my practice I usually found that such a patient had some justification, for he like other patients complained that his physician refused to listen to him, interrupted him in what he was trying to tell him, or showed in other ways that he was not interested. Some patients complained that their previous physicians appeared bored, became restless, and gave the impression of feeling disgusted.

These complaints demonstrated conclusively that people consult physicians for all kinds of troubles. I learned from other patients that it had taken them a long time to decide to discuss certain facts about themselves with their physicians, only to be interrupted with questions about their weight, their appetite, and other efforts to distract them from continuing.

The patients who drift from one physician to another are usually suffering from severe emotional disorders which make it difficult for them to maintain relations with anyone. They need to be discouraged immediately from shopping among the members of our profession and to be told very frankly at the time of their first visit how easy it is for human beings to find fault with others instead of themselves.

LOUIS A. KRAUSE, M.D.

Professor of Clinical Medicine, University of Maryland School of Medicine

I WANT TO FOLLOW UP and emphasize some of the things you heard just a moment ago from Dr. Bartemeier.

Some of the things I will string along with, but I want to qualify them a little bit. The first thing that you should have in mind when a patient comes to see you is, be sure you accept the patient. That is not always an easy thing to do. Accept the patient and listen to him. Don't pass any judgment. You've got no right to do that to anybody. Accepting the patient is the first thing out of the box, so to speak. Listen to him. Listen to his history.

You can spend 15 minutes rapidly. You can spend 15 minutes slowly. If you are going to fidget, sit first on one edge of the chair and then the other while he is reciting his story, you are going to be defeated and he is not going to be helped.

You can leisurely listen to him because he has something to tell you.

Then the next thing, don't forget to do a complete physical examination. I wish that would be done by every specialist as well as by every general practitioner.

You heard Dr. Bartemeier say, the patient gives us the authority. Yes. But you should earn it. That is what you should do. His submission should be earned, not blindly turned over to you. And we can best earn it in our present state of knowledge, until we can get some robot that will feed us the information and give us the answer, by doing a physical examination. That is still more than 50 per cent of the diagnosis, and don't forget it.

And there are many things upon which you cannot make a diagnosis with the X-ray and with laboratory—many things that still exist that you will pick up in the history or the physical.

You have two involved, the doctor and the patient. The doctor represents authority, science, decision. Sometimes that authority is unfortunate. It is then he becomes impersonal. How many specialists live in such a rare atmosphere! And then the relationship becomes cold. Why does the patient go to see another doctor? Therein, frequently, is the answer.

The patient has confidence when he comes or else he wouldn't have elected you as his doctor. He submits himself. But then he may be impatient. He may want to receive a speedy diagnosis, a fast cure. He may have wrong knowledge from the lay press. Then he loses confidence and he goes to somebody else. And then we ask for frankness. Why did he leave the other doctor? Is he going to tell you that? I suspect he won't. He may not have carefully analyzed it himself.

Ideally we've got to exclude technical dictatorship on the part of the doctor and the blind confidence and submission on the part of the patient. The doctor must explain to the patient. He's got to put himself on the level with the patient.

If there is a crisis in the doctor's and the patient's relationship, it is usually not due to science and technic but usually to the mentality and the methods that are employed. You've got to overcome this feeling of separateness; rather, have one of community.

Medical ethics, yes. They've been known and practiced for a long time. Ideally, however, don't forget it means absolute dedication of you to the patient. How often is that not done.

Self-sacrifice, discretion, morally resolute character, and professional ability; confidence of the patient in the integrity of the doctor and in his medical knowledge, his willingness and his capability to listen openmindedly to his problem—then he may be able to convince the patient.

Personal contact should never become a routine thing. A routine function will destroy any good relationship that may exist.

As to freedom of medical choice, the patient should be unrestricted in getting medical care. That is an indispensable requisite for ideal care with the highest standards. Don't forget, the first thing you should have in your mind after you have gotten the history and completed your physical, as a good doctor you should ask yourself, where is the pathology? That is not always easy to do. Where is the pathology of that headache that Dr. Bartemeier so well discussed?

And then your next question should be: Is that pathology reversible?

Then, when you have considered all the possible causes that are reversible, and so many more of them are becoming increasingly reversible today, then you will not fall into the danger of treating symptoms. Treating symptoms only until you can arrive at the pathology may be justified.

That is the approach that we should all bear in mind. The variety of technical methods tend to increase the distance between the doctor and the patient. The family doctor often becomes merely the director of medical care. He sends the patient to 4 or 5 specialists, and each one prescribes so and so and whatnot, and the patient in the end knows not who is his doctor. He has a medical director, another doctor taking care of him.

That I think becomes increasingly a problem as we divide and specialize more and more, which has its justification to some extent.

The family doctor, as I have so heartily seconded what Dr. Bartemeier said, is a part of the family, and the family doctor knows the patient when he is not ill. He knew him when he was in good health. And don't forget, that's still a very sound thing to say: "I'm going back to my old family doctor; he knows my constitution."

Don't laugh at that. Look at youself in a mirror before you do that. That family doctor knows the environment, he knows the neuroses, the hypochondriac, or whatnot, the duodenal ulcer in the family, the diabetes in the aunt or the uncle; it is of great importance to that family doctor to know the background of the patient. Because he knew him in health, he would be the first one to recognize when that patient shows some sign or symptom of disease.

And he ought to know the social life of the patient too. To know that, to know how he divides his interests, his time, that is just as important. He then can draw his conclusions.

Should his conscience be his guide? How are you going to define conscience, what you heard referred to in the first paper? Conscience is mores. You are not born with that. That was given to you by training.

If I know what your training is, then I know your conscience. Then I will be able in my own mind to pass the judgment, but not to you.

QUESTION AND ANSWER—DR. KRAUSE

Q. In how much detail should symptoms be explained?

A. I take a lot of time out to go into detail, to explain to the patients. It is much better, and you know what you are shooting at.

For instance, there is a simple thing like a coated tongue. I tell them that a coated tongue is a normal tongue, that a clean, red tongue is a sick tongue, and the same is true of any other questions. Postnasal dripping was referred to. What is wrong with it? Did you see anybody suffer from it before they were told about it? If you leave the Atlantic Seaboard it will disappear.

Mucus is the best defense we have in our body. It's Nature's best barrier against the invasion of germs. If you swallow the mucus, you are just saving so much protein, which is used eventually. It is not destructive to the GI tract and nothing happens. Go into detail about it. There are the facts.

A deviated septum—did you ever see one nostril go to one lung and the other nostril go to the other lung? You have plenty of room in the nose if the septum is deviated. The normal septum in the white man is deviated. The normal septum in the colored man is straight. Tell the patient that and also the throat man who wants to correct the deviated septum.

Then the other thing is the GI tract. You often hear, "I didn't have a bowel movement today or yesterday; is that necessary?" Why do you think Nature made a colon large enough to take care of us for 2 or 3 days at one time? You don't have to be in the lavatory every morning at 7:00 o'clock. What a horrible existence that would be if I thought every day I must be there from now on until eternity.

I don't hesitate to explain what I think on the subject, if they can follow me, and it is much better. Your problem is often solved when you tell them about the physiologic alterations that are necessary for everyday life.

EDITOR'S NOTE: The third panelist on this topic was Dr. Thomas E. Rardin, of Columbus, Ohio, who is Vice Chairman of the Section on General Practice of the American Medical Association. His paper was published in the February 1961 issue of the MEDICAL ANNALS as the first in this series.

THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

BEQUEST FUNDS

June 30, 1961

THE ARTHUR J. HALL BEQUEST (1931): $218.32

Purpose: To be placed in the Society's Charity Fund, to be expended as members deem advisable.

THE EDWARD Y. DAVIDSON BEQUEST (1933): 11.16

Purpose: Dr. Davidson verbally requested that instead of refunding to him $5.00 of the dues paid for the year 1933, that the said amount be transferred to the 'Charity Fund.'

THE GEORGE MARTIN KOBER BEQUEST (1934): 11,363.94

Purpose: "To pay the sum of six thousand dollars ($6,000.00) to the Medical Society of the District of Columbia, the income to be devoted for the relief of old or infirm physicians."

THE WILFRED M. BARTON BEQUEST (1934): 2,080.29

Purpose: "The principal thereof and the income therefrom shall be used in the sole discretion of the Executive Committee in affording relief and assistance to worthy young graduate physicians during their first year of practice."

DAVIDSON LECTURE FUND (1937): 367.00

Purpose: "That the Medical Society of the District of Columbia, being desirous of suitably expressing its deep sense of grateful appreciation of the priceless services rendered it by Dr. Edward Young Davidson in obtaining its present building, and being no less interested in perpetuating this striking example of disinterested service and true loyalty from one of its members, hereby appropriates the sum of $3,000.00 or as much thereof as may be necessary to establish and endow in perpetuity the Davidson Lecture. This lecture shall be given biennially by a physician or other scientist who shall be nominated one year in advance by the Executive Committee. For his services he shall receive an honorarium of $300.00."

Securities: 444 shares Washington Mutual Investors Funds $3,614.03

KOBER LIBRARY FUND (1951): 5,043.09

Purpose: ". . . that the proceeds from the sale of this stock should be turned over to the Medical Society of the District of Columbia to be used for the upkeep of its Library."

STERLING RUFFIN BEQUEST FUND (1951): 15,029.08

Purpose: "Three/fortieths (3/40) thereof to the Medical Society of the District of Columbia to be used for the relief of ill or superannuated needy Active or Life members of the Society. Awards from this fund shall be made in cash in the discretion of a majority of a special committee of five (5) members appointed by the President of the Society. No member of such committee shall serve for a longer period than two (2) years. Report of expenditures shall be made from time to time by the committee to the Society, without, however, disclosing the names of beneficiaries."

Securities (book value):

$3,000.00 U. S. Treasury Bonds 2½% Due 12/15/72-67	$3,086.53
10 shares American Telephone & Telegraph	487.10
22 shares Chase Manhattan Bank	614.70
21 shares E. I. duPont de Nemours & Co.	970.58
45 shares General Motors Corp.	397.34
146 shares Riggs National Bank, Washington, D. C.	8,252.30
30 shares Standard Oil Co. of Indiana	570.00
36 shares Standard Oil Co. of New Jersey	378.61
30 shares Westinghouse Electric Corp.	318.75
Total book value of stock	$15,075.91

FRANK M. McCHESNEY FUND (1959): 520.26

Purpose: "Dear Mr. Wiprud: The designation in one's will of favorite projects is admirable. However, I feel that as the Lord prospers me I would like to share from time to time in worthy causes. Enclosed find a check. I will leave it to your judgment as to where it can best be used."

TOTAL CASH IN BANK $34,633.14

WASHINGTON PHYSICIAN HEADS AMA BOARD OF TRUSTEES

At the 110th Annual Meeting of the American Medical Association in New York, June 26–30, Dr. Hugh H. Hussey, Dean of the Georgetown University School of Medicine, was elected Chairman of the Board of Trustees. Dr. Hussey has served on the Board since 1956, recently as Vice Chairman, and for many years preceding his election to the Board was the Medical Society's delegate to the AMA.

Dr. Leonard W. Larson, of Bismarck, N. D., was installed as the 115th President of the Association.

Dr. George M. Fister, of Ogden, Utah, is the new President-elect. He will assume office, June 26, 1962, in Chicago during the 111th Annual Meeting.

GEORGE M. FISTER, M.D.
President-elect of the AMA

Dr. Fister has served as a member of the AMA's Board of Trustees since 1957 and previously was a member of the House of Delegates. He is Past President of the Utah State Medical Association, the Ogden Surgical Society, and the Western Section of the American Urological Association.

A native of Logan, Utah, Dr. Fister obtained his medical degree in 1919 from Rush Medical College, Chicago. After engaging in general practice for 4 years in Brigham City, he returned to the East for special studies in the field of urology, and also did postgraduate work in London and Vienna. He has been practicing in Ogden as a specialist in urology since 1928.

Dr. Fister is serving on the Board of Regents of the University of Utah. He is Director and member of the Utah Division of the American Cancer Society, National Association of Blue Shield Plans, and a member of the medical advisory staff of *U.S.S. Hope*.

HUGH H. HUSSEY, M.D.
Chairman of the AMA Board of Trustees

Delegates from the D. C. Medical Society in attendance at the meetings of the House of Delegates were Drs. Raymond T. Holden and Ralph M. Caulk. Theodore Wiprud, Secretary of the Society, also attended the meetings of the House of Delegates. The report of the delegates and the Secretary appears in this issue of the ANNALS.

Representative Walter H. Judd, of Minnesota, former medical missionary, was named recipient of the 1961 Distinguished Service Award. Representative Judd was cited for his noted achievements as a medical missionary, humanitarian and statesman devoted to world peace. He has been a member of

AUTOMATED PATHOLOGY LABORATORY AT AMA CONVENTION

Dr. Thomas M. Peery (center), of George Washington University, assisted by **Dr. Coleman Seskind**, of the National Institutes of Health, and **Miss Sylvia Bunting**, President of the Washington, D. C. Society of Medical Technologists, are reading the results of their own blood samples at the automated pathology laboratory which was a featured exhibit at the AMA meeting in New York, June 26–30. Shown in the background is a "robot chemist" called the AutoAnalyzer, developed by the Technicon Instruments Corporation of Chauncey, New York; this and other automatic equipment were used for testing blood samples of more than 2,000 physicians attending the scientific sessions.

Congress since 1942. He was the author of legislation in Congress which culminated in the World Health Organization and the International Children's Fund.

Recipient of the $5,000 Passano Award for 1961 was Dr. Owen H. Wangensteen, Professor and Head of the Department of Surgery at the University of Minnesota. A reception and dinner was held at the Hotel Statler-Hilton, June 28, in his honor. President Larson was one of the speakers.

A special feature of the AMA meeting was a highly automated pathology laboratory, which was operated under the direction of Dr. Thomas M. Peery, Professor of Pathology at George Washington University and Chief of Pathology at the University Hospital. The laboratory was equipped to perform 6,000 procedures a day. Some 2,000 physicians at the meeting took advantage of the opportunity to be processed by the laboratory. A total of 14 tests per physician was run along 8 assembly lines. The exhibit was located on the third floor of the Coliseum adjacent to the area where physicians could receive physical examinations, an annual feature of the AMA meeting.

Dr. A. B. C. Knudson and Dr. Frank J. Schaffer, Director and Assistant Director, respectively, of the Physical Medicine and Rehabilitation Service of Veterans Administration, received a Certificate of Merit for their exhibit on rehabilitation of the long-term chronic patient. Both physicians are Associate members of the D. C. Medical Society.

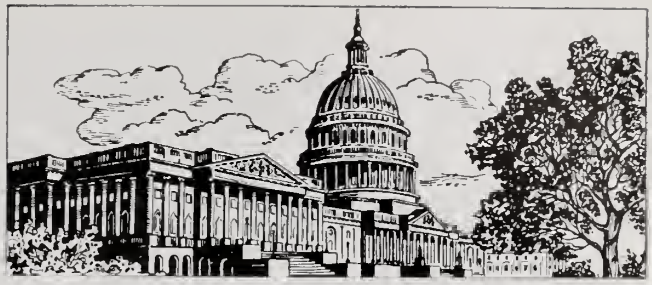
One hundred and forty-four physicians submitted 300 original paintings, drawings, photographs, and pieces of sculpture for showing at the American Physicians' 24th Annual Art Exhibit in the Coliseum. Dr. Milton L. Goldman, Washington surgeon, was awarded 2 prizes—the Gold Medal first prize for his casein painting, "After the Prayer Meeting," and a Silver Medal for "Best of Show."

The professional jury for the National Art Exhibit was headed by Dr. Dong Kingman. An exhibit of the award winners was open to the public at the Pepsi Cola Building, 500 Park Avenue, following the AMA meeting. At that exhibit Dr. Goldman was represented by 3 additional paintings, an oil, a water color, and a crayon drawing.

During the past few years Dr. Goldman has been attending night classes in painting, sculpture and art history at the American University and in June he was awarded the degree of Bachelor of Fine Arts.

Members attending the AMA Convention were saddened to learn of the death of Dr. Walter L. Bierring on June 24 in Des Moines, Iowa. Before his

(*Continued on page 568*)



NEWS & PERSONALS

Meetings

The American Fracture Association is holding its **22nd Annual Meeting** at the Shoreham Hotel in Washington, September 16–23. Attendance at the meeting will be accepted for Category no. 2 by the American Academy of General Practice. The Program Chairman for the meeting is Dr. Milton C. Cobey.

The 13th Postgraduate Assembly in Endocrinology and Metabolism, under the co-sponsorship of The Endocrine Society and the National Institutes of Health, will be held in Bethesda, Md., October 2–6. A comprehensive review of clinical endocrine problems and current research activity in these areas will be presented. The registration fee is $100.00 for physicians and $30.00 for residents and fellows, with enrollment limited to 100. Further information may be secured from Dr. Roy Hertz, National Institutes of Health, Building 10, Bethesda 14, Md.

The first National Congress on Medical Quackery will be held in Washington, D. C., October 6 and 7, under the sponsorship of the American Medical Association's Department of Investigation and in coöperation with the United States Food and Drug Administration. Organizations which will participate in the Congress will include the American Cancer Society, the Arthritis and Rheumatism Foundation, the National Better Business Bureau, and the following Federal agencies: the Department of Health, Education, and Welfare, the Post Office Department and the Federal Trade Commission.

Advance registration is necessary. Any interested member should contact the Executive Offices of the D. C. Medical Society.

The 13th Annual Scientific Assembly of the Maryland Academy of General Practice will convene at the Tidewater Inn, Easton, Md., on Saturday and Sunday, October 7 and 8. Members of the D. C. Medical Society are cordially invited to attend.

The Potomac Chapter of the American College of Chest Physicians will convene for an all-day meeting on Sunday, October 15, at the Sheraton-Baltimore Inn in Baltimore, commencing at 8 a.m. Most of the speakers will be faculty members of the University of Maryland and Johns Hopkins University Schools of Medicine.

Dr. Milton B. Kress, Baltimore, President of the Chapter, will preside at the morning session, and Dr. John W. Trenis, Washington, Vice President, will preside during the afternoon. The day will close with a business meeting and election of officers.

The Blue Shield Annual Program Conference is scheduled for October 23 and 24 at the Drake Hotel in Chicago, under the sponsorship of the National Association of Blue Shield Plans. The theme for the meeting is "New Dimensions for Progress."

Among the leaders in American medicine who have been invited to address the delegates are Dr. Leonard W. Larson, President of the American Medical Association; Dr. Aims C. McGuinness, Executive Secretary, Committee on Medical Education, New York Academy of Medicine; and Mr. George Bugbee, President of the Health Information Foundation.

General News

The Executive Board of the Medical Society of the District of Columbia met in the Society's building, July 24, with Chairman Watts presiding. Dr. Raymond T. Holden presented the report of the delegates to the AMA, which is published in this issue of the ANNALS. The report was accepted by the Board with commendation for the effective participation of the delegates at the New York meeting of the House.

A motion was made and carried that the President and Secretary of the Society be authorized to sign an agreement with the Office of the Dependents' Medical Care, Office of the Surgeon General of the Army, extending the Society's participation in the Dependents' Medical Care Program for the year beginning August 1, 1961.

The Committee on Coöperation with the D. C. Bar Association reported to the Board that it is planning a luncheon meeting to which Judge Alexander Holtzoff will be invited to discuss his views in regard to impartial medical testimony. The date of the luncheon has been scheduled for the second Monday in October, i.e., October 9.

President Stubbs submitted the name of Dr. Raymond A. Osbourn to be added to the Committee on Coöperation with the D. C. Bar Association. The nomination was confirmed.

Dr. Peter D. Comanduras, Secretary General of Medico, writes the Editor that surgeons, internists, general practitioners, and anesthetists are needed in Afghanistan, Cambodia, Vietnam, Malaya, Laos, and Haiti. Salaries, length of service, and specific information concerning each project will be sent on request.

There are 15 Medico-supported units in 12 countries in various parts of the world. New requests are being received for additional medical and surgical teams in South America and in the newly emerging countries in Africa.

Medico is located at 420 Lexington Avenue, New York 17, New York.

Colonel Frank M. Townsend, Director of the Armed Forces Institute of Pathology, advises that recent shipments of pathologic materials have been received in such poor condition by the Washington, D. C. Post Office that his personnel have had to make numerous special pickups of packages normally delivered. Improper and careless packing of such materials not only is a waste of personnel time but results in the loss of valuable medical material. Tissue specimens, although packaged in plastic bags, should not be placed in containers along with microslides and paraffin blocks, as sharp corners can puncture the plastic, causing leaking fluids that damage the entire shipment. Slides should be well padded, regardless of the type of container used. All blocks pertaining to a single surgical or autopsy case should be placed in one box; these small boxes should then be grouped in one large container. Case histories should not be placed inside of boxes containing pathologic materials, unless they are placed in plastic bags for protection. Sturdy boxes, properly secured and addressed, should be used to withstand handling during transit. Colonel Townsend requests the coöperation of all contributors.

The Public Health Service announces an **increase of $500 in stipends for postdoctoral fellowships.** This raises the annual stipend to $5,000 the first year, $5,500 the second, and $6,000 the third.

The fellowship program, administered by the Natural Institutes of Health, Bethesda, Md., is designed to increase the number of scientists qualified to carry on independent research in medically related fields. At the postdoctoral level, fellowships are awarded to provide advanced training in the technics of basic or clinical research.

The $500 increase in stipends applies to new and continuation postdoctoral research fellowships awarded on or after July 1, 1961. Allowances for dependents, travel expenses, and research supplies have not been increased. The law authorizes the Surgeon General to set the amounts of stipends and allowances.

Colonel Robert C. Hunter has succeeded Colonel Conn L. Milburn, Jr., as **Executive Officer of Walter Reed General Hospital. Colonel Milburn** has been appointed **Director of the Walter Reed Army Institute of Research.**

Colonel Hunter is a medical graduate of the University of Chicago. He reported to his new assignment from William Beaumont General Hospital, El Paso, Texas, where he had served as Chief of the Department of Medicine since August, 1955.

With its 49th commencement, **the College of Medical Evangelists** at Loma Linda, California, founded in 1905, has ceased to exist as such and on July 1, 1961, became officially **Loma Linda University.** The first classes in the new University began in September. Future graduates will receive diplomas bearing the University name.

Georgetown University was host, July 18, to **Dr. Leonard W. Larson,** the new President of the American Medical Association. He visited the Center as a guest of the Dean of Medicine, Dr. Hugh H. Hussey. Dr. Larson praised Georgetown's pioneering program for attracting qualified high school students to medical and dental careers to help meet a threatened shortage of practitioners in these professions.

In addressing the 20 boys and girls who are studying under 2-month research scholarships, Dr. Larson expressed the hope that similar action toward attracting qualified boys and girls into the medical field would be taken by many other medical schools and medical societies. The young men and women at Georgetown were selected from more than 400 applicants of high scholastic standing.

The Kimbrough Army Hospital, a $5-million medical facility at Fort George G. Meade, Maryland, named in honor of the late Colonel James C. Kimbrough of the Army Medical Corps, was dedicated June 29, 1961. Colonel Kimbrough, who was well known among Washington physicians, achieved eminence in the field of urology during his long medical career in the Army.

Mr. Norman A. Carter, of Washington, a fourth-year medical student at Howard University, has been awarded one of the 4 $600 "Burroughs Wellcome Summer Scholarships" for research and clinical training in the field of allergic diseases by the Allergy Foundation of America. Burroughs Wellcome, Inc., of Tuckahoe, N. Y., supports 4 of the 21 summer scholarships awarded and administered by the Allergy Foundation of America.

Mr. Carter is carrying out his work under the direction of Dr. Roland B. Scott, Head of the Department of Pediatrics at Howard University.

Special Air Services, Inc., of Alexandria, Va., has placed in service a twin-engine, 200 mile-per-hour aircraft which has been especially designed for use as an air-ambulance. This aircraft can accommodate 2 stretcher-borne patients simultaneously. It carries oxygen supply and equipment capable of resuscitation, demand inhalation or aspiration. Ample space is provided in the passenger compartment for the doctor or nurse and several members of the family.

Since all flights are privately arranged, the plane can leave at any time of the day or night and can fly at an altitude selected by the doctor. Fully equipped for all-weather flying, Special Air Services serves over 6,000 airports in the United States and Canada. Arrangements for the flights can be made by contacting Special Air Services, Inc., P.O. Box 305, Alexandria, Virginia, or by calling King 9-3146.

Personals

Dr. Mitchell W. Spellman, Associate Professor of Surgery, Howard University College of Medicine, was appointed Chief Medical Officer of D. C. General Hospital, effective July 1.

Dr. Spellman graduated in medicine from Howard University School of Medicine in 1944. He interned at City Hospital, Cleveland, Ohio, and served a residency at the same hospital for a year. He received his training in surgery at Freedmen's Hospital and at the University of Minnesota Hospital. From the latter he was awarded the degree, Doctor of Philosophy in Surgery. He is certified by the American Board of Surgery.

In addition to his membership in the D. C. Medical Society, Dr. Spellman is a member of the American Medical Association, the National Medical Association, and the American Federation for Clinical Research. Except while studying at the University of Minnesota, he has been on the teaching staff of Howard University since 1948.

PRIZE-WINNER AT PHYSICIANS' ART EXHIBIT

Dr. Milton L. Goldman stands before his painting, "After the Prayer Meeting," which was awarded a Gold Medal first prize at the American Physicians' Annual Art Exhibit held in New York City during the AMA meeting. Story on page 560.

Dr. Frank E. Wilson, Executive Vice President of the Joint Blood Council, has been designated as Chairman of the Advisory Council on Reserve Affairs by Lt. General Leonard D. Heaton, the Army Surgeon General.

The Council is composed of all Ready Reserve General Officers of the Army Medical Service and advises General Heaton and his staff on such matters as annual active duty for training, educational requirements and standards, and mobilization capabilities for medical reservists.

Dr. Wilson is a Brigadier General commanding the 805th Hospital Center to which is attached the 354th General Hospital and the 395th Convalescent Center of the Washington Metropolitan Area, as well as 11 other hospitals and medical organizations in Virginia, Maryland, Delaware, and Pennsylvania. He is also a Vice President of the Association of Military Surgeons.

At the Annual Meeting of the Joint Blood Council in New York, June 26, Dr. Wilson was reëlected Executive Vice President and Secretary. New President of the Council is Dr. Gunnar Gundersen of LaCrosse, Wisconsin.

Dr. Thomas W. Mattingly became a founding member of the Association of University Cardiologists at its organizational meeting in New York City, June 26. Dr. Mattingly is Consultant in Cardiology to Walter Reed General Hospital and Senior Attending in Medicine and Director of Medical Education of the Washington Hospital Center. A retired Brigadier General of the U. S. Army Medical Corps, he is also Clinical Professor of Medicine at Georgetown University.

Dr. Mattingly's activities in the field of cardiovascular diseases was recognized by his recent election to the Subspecialty Board in Cardiovascular Diseases of the American Board of Internal Medicine for a term of 4 years. Recently he received an appointment as Honorary Consultant to the Armed Forces Institute of Pathology in recognition of his achievements in the fields of cardiology and military medicine.

Dr. Samuel Zola is the new Senior Attending Surgeon at Providence Hospital. A staff member at Providence for 20 years, he is a member of the Executive Committee and Director of the Emergency Room. A committee composed of Dr. Zola, Chairman, Dr. Philip A. Caulfield, and Dr. John A. Long is in charge of the Providence Hospital Centennial Publication to be ready for distribution shortly.

Dr. Jack Kleh, Medical Director, D. C. Department of Public Welfare, **and Dr. Claire Ryder,** of the Division of Chronic Disease, Public Health Service, are 2 appointees to an *ad hoc* committee sponsored jointly by the American Hospital Association and the Public Health Service to develop principles and recommendations on planning facilities for long-term patient care. The 17-member committee, composed of national leaders in the long-term care field, is headed by Mr. Ray E. Brown, of Chicago, Superintendent of the University of Chicago Clinics and Past President of the American Hospital Association. Dr. Ryder is an Associate member of the D. C. Medical Society.

Dr. Maurice Protas has been elected to the Council of the American Diabetes Association. The term of office is for 1 year.

Dr. Protas was also elected Chairman of the Assembly of State Governors and Affiliate Delegates of the ADA.

Dr. A. B. C. Knudson, Director of the Physical Medicine and Rehabilitation Service at Veterans

Administration since 1948, was honored for his contribution to disabled veterans at the Tri-Organization Scientific and Rehabilitation Conference at Indianapolis, Ind., July 10. Dr. Knudson is an Associate member of the D. C. Medical Society.

The Tri-Organization group consists of the Association for Physical and Mental Rehabilitation, the Association of Medical Rehabilitation Directors and Coördinators, and the American Association for Rehabilitation Therapy.

Dr. Robert C. Hecker has been elected Chairman of the Physicians' Advisory Committee to the Greater Southeast Community Hospital, succeeding Dr. Herbert P. Ramsey. Plans are moving forward for the Hospital to be built at 13th Street and Southern Avenue, S.E.

At convocation exercises, June 25, the American College of Chest Physicians conferred fellowship certificates on 204 physicians. The recipients included **Dr. J. Winthrop Peabody, Jr.,** Washington, D. C.; **Dr. Robert F. Donohoe,** Bethesda, Md., **and Dr. George A. Higgins, Jr.,** of Mt. Alto Veterans Administration Hospital. Drs. Donohoe and Higgins are Associate members of the D. C. Medical Society.

Dr. Bettie I. Graves Clark was certified by the American Board of Pediatrics on April 28, 1961.

VIRGINIA MEDICAL LICENSURE REGULATIONS

A recent survey by the Medical Council of Northern Virginia showed that many physicians in this area have not fully complied with the legal requirements to practice medicine in Virginia. In order to clarify the situation Dr. John C. Watson, the President of the State Board of Medical Examiners, was recently interviewed by a reporter from the *Medical Bulletin of Northern Virginia*. The following is a brief summary of the present requirements:

1. All physicians who maintain an office, perform surgery, admit patients to a hospital, or sign birth or death certificates in the State of Virginia must have a valid license issued by the State Board of Medical Examiners.
2. Physicians who are licensed in a state with similar regulations may obtain a Virginia license by reciprocity and are not required to take an examination.
3. Borderline certificates may be obtained by physicians who are properly licensed in Maryland or the District of Columbia for occasional or emergency use. This certificate is not intended for the use of physicians who live, maintain an office, or regularly care for hospital patients in Virginia.
4. No local license is required of a physician called in consultation unless he should take over the management of the patient.
5. All license certificates must be registered with the clerk of the circuit court in the jurisdiction of the principal area of practice. Registration in some other part of the state is not adequate.
6. All physicians practicing under either the standard license or a borderline certificate are required to renew their certificate by paying $1.00 to the State Board of Medical Examiners before the first of July each year.
7. The practice of medicine without a properly registered license is a misdemeanor and the consequences may be grave.
8. There are similar regulations in Maryland and the District of Columbia. Physicians who treat patients in a Washington hospital should have a standard District of Columbia license and not a borderline certificate.

Membership

The following applicants for membership were duly elected to membership by the Executive Board, July 24, 1961, in accord with Chapter II, Article VIII, of the Constitution and By-laws of the Society.

Active Members

Sanford L. Billet, 1712 Eye Street, N. W.
Francis L. Clark, Georgetown University Hospital
John J. Geary, Providence Hospital
William E. Matory, Freedmen's Hospital
John E. Nardini, 5921 Bradley Blvd., Bethesda, Md.
William J. Novak, 3000 Connecticut Avenue, N.W.

Associate Members

Dale C. Cameron, St. Elizabeths Hospital
Daniel L. Hayes, 8218 Wisconsin Avenue, Bethesda, Md.

Correspondence

WASHINGTON, D. C., August 1, 1961

MR. LEO H. IRWIN, CHIEF COUNSEL
HOUSE WAYS AND MEANS COMMITTEE
1102 HOUSE OFFICE BUILDING
WASHINGTON 25, D. C.

DEAR MR. IRWIN:

In common with other medical organizations, our Medical Society has a deep interest in H.R. 4222, the bill now before the House Ways and Means Committee. As President, I have been directed by the Executive Board of the Medical Society of the District of Columbia to state its position in regard to this legislation as follows:

There is a problem in connection with the health care of the aged, and it is growing. Financing is a major part of it. We recognize for the entire group of the aged that there are 3 sources of funds, personal, prepayment and Government (national and local). All 3 sources should be preserved and balanced. We in this Society are committed to the use of voluntary health insurance, especially the locally controlled nonprofit plans. We believe that their use should be continued and expanded for all the people as well as for the aged. Government funds, national and local, should be graded to need and should supplement and not supplant other types of payment. Especially do we believe that the form of administration for using such funds should employ the prepayment mechanism and influence its improvement for the rest of the people. Any action of the Federal Government can and should be made to achieve these ends. Therefore, we believe that H.R. 4222 is not the best way to achieve its own stated purposes. Possibly it could be revised extensively enough to meet public needs, but probably it would be better to build the 3-way program from scratch to use in proper balance all 3 sources of funds.

In a communication directed to you by Mr. Theodore Wiprud, Executive Director of our Society, the request was made that I be allowed to present our Society's position in person during the current hearings. However, I have learned that so many demands to be heard have been made by organizations and individuals that to conserve the Committee's time I am submitting the Society's statement in writing for inclusion in the record.

If our Society can be of any assistance to the Committee, please let me know.

Sincerely yours,
DONALD STUBBS, M.D.
President, The Medical Society of the District of Columbia

SILVER SPRING, MARYLAND, August 7, 1961

TO MR. WIPRUD:

The American Academy of Allergy is studying the history and treatment of allergic reactors to insect stings. Both unusually large local reactions and systemic reactions are of interest. The study is conducted by volunteer physician members of the Academy without cost to the patient. Coöperating patients will be sent a wallet-sized card to alert medical personnel to the possibility that a sudden severe illness might be caused by insect-sting allergy.

We wish to compile a list of several thousands of persons allergic to insect stings and would like to follow up this list with a questionnaire to be filled out by the patient. A follow-up annual inquiry of the patient will be made as to whether he has been stung during the year, by what type of insect, if known, and with what results. We anticipate that some of these patients will have had no immunization for stinging insects, some will have had a few immunizing doses, and some may be treated with a long-term course of hyposensitization. By comparing the subsequent sting history of persons in these various categories we hope to learn the most desirable therapeutic course to follow. *At this time no one knows for sure how much treatment should be given*—or even what happens to the majority of these people if they remain untreated. Of course, we all are aware of the acute near-fatal and fatal reactors. But is their incidence in a known sensitive group high or low? Likewise, we do not know whether the patient who has extraordinarily large or persistent local reactions to insect stings has a high or a low risk of developing anaphylactic reaction on subsequent stings.

It would be much appreciated if you would ask your member physicians to send us the names and addresses of persons who show either severe local or generalized allergic reactions to insect stings for this research purpose. Such patients will be contacted with . . . [a] questionnaire. The physician in charge of the patient will, of course, continue to supervise his care.

The Insect Research Committee representative for your area is Dr. Halla Brown, 3304 Idaho Avenue, N.W., Washington 16, D. C.

Thank you for your help and consideration of this problem.

Eloise W. Kailin, M.D.
Chairman, Insect Allergy Committee, Research Council, American Academy of Allergy

Note: Some states require the patient's consent to release any information to another physician. In these states suitable permission from the patient should be obtained.

Obituaries

JOSEPH RAYMOND BERRY HUTCHINSON, M.D.

(1902–1961)

Dr. J. Raymond B. Hutchinson, Vice President and Medical Director of Acacia Mutual Life Insurance Company, died August 1, 1961 at Georgetown University Hospital after a brief illness. His home was at 3157 North Nineteenth Street, Arlington, Va.

Dr. Hutchinson was born in Loudoun County, Virginia, on August 24, 1902. He graduated from Eastern High School in Washington, took his premedical studies at George Washington University, and graduated in medicine from the Medical College of Virginia in 1930. He immediately joined Acacia as an Assistant Medical Director. In 1939 he was promoted to the position of Medical Director and became Vice President as well in 1945. In 1954 he was elected a member of Acacia's Board of Directors.

Dr. Hutchinson served with the U. S. Navy during World War II and at the time of his release from active duty held the rank of Commander.

Dr. Hutchinson was a member of the governing staff and a consultant in cardiology to the Arlington Hospital. He was a member of the Medical Society of Virginia and the Arlington County Medical Society, and a Past President and President-elect of the latter. He was elected an Associate member of the D. C. Medical Society in 1932. He was also a member of the American Medical Association, the Association of Physicians and Surgeons of America, and the American Heart Association. He was recently appointed by Governor Lindsay Almond to the Advisory Council on Nursing Training for the State of Virginia.

Very active in insurance medical circles, he was Secretary and Past Chairman of the Medical Section of the American Life Convention; a member of the Association of Life Insurance Medical Directors of America and the Board of Life Insurance Medicine. He organized and was a charter member of the Middle Atlantic Medical Directors Club. He was also active in civic work, and served on the Board of Directors of the American Red Cross of Arlington, the Tuberculosis Association of Arlington, the Northern Virginia Heart Association, and the Virginia State Heart Association. He was recognized as an authority on diseases of the heart.

Dr. Hutchinson was an elder of the Clarendon Presbyterian Church. He belonged to the Masonic Fraternity, the North Arlington Lions Club, and the Washington Golf and Country Club.

He is survived by his wife, Mrs. Mary Kirby Hutchinson, and a son, Dr. Joseph Raymond B. Hutchinson, Jr., of Shelton Park, Md. He is also survived by a sister, Mrs. Heloise Starns, of Arlington, Va.

Psychiatric Research—Felix

(Continued from page 512)

hopeful is the rapidity with which important new pieces are being added each year—contributions at the genetic, the physiologic, the psychologic, and the sociologic levels. I think it can be safely said that the field of psychiatric research has come out of its swaddling clothes and established itself as a thriving, albeit still young and in many respects immature, field of scientific endeavor.

Diphoxazide—Milligan and O'Doherty

(Continued from page 515)

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Carbetapentane—Robin

(Continued from page 527)

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Neuropathy in Primary Amyloidosis—Masucci et al

(Continued from page 537)

A sensorimotor neuropathy is characteristic in amyloidneuropathy. The occurrence of a motor neuropathy with the complete absence of sensory manifestations is unusual. Cranial nerves are rarely involved.

A case report has been presented with the following unusual features: (1) a motor neuropathy, (2) occurrence in a Negro, (3) duration of 9 years (longer than most reported cases), (4) cranial nerve (right facial) involvement, (5) no clinical evidence of primary amyloidosis other than in peripheral nerves and muscles, and (6) continuing ambulation.

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Report of Delegates to AMA House of Delegates

(Continued from page 551)

to the increase in AMA dues—$10 on January 1, 1962* and $10 additional on January 1, 1963,† and approved a markedly expanded drug information program for members submitted by the Board and the Council on Drugs.

The overall meeting of the Association in New York was most successful, with the largest attendance to date. There was a total registration of over 56,000, of whom over 23,000 were physicians.

Respectfully submitted,
Raymond T. Holden, M.D., *Delegate*
Ralph M. Caulk, M.D., *Delegate*
Theodore Wiprud, *Secretary*

---

* AMA dues will be $35.00 per year as of January 1, 1962.
† AMA dues will be $45.00 per year as of January 1, 1963.

AMA Meeting

(Continued from page 560)

death Dr. Bierring was the oldest living Past President of the AMA. He first served the Association as Chairman of the Section on Pathology and Physiology in 1907. In 1919 he was elected Chairman of the Section on Medicine and then served as President in 1934.

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BOOK REVIEWS

Surgical Diseases of the Chest. Edited by Brian Blades, M.D. Price, $22.00. Pp. 580, with 267 illustrations. St. Louis: Mosby, 1961.

In my opinion this volume is easily the best text published in the field of thoracic surgery. The volume is well planned and well executed. There are 18 outstanding contributors and each speaks with authority on his own special interest. This in itself is of considerable value. Considering present-day practice, one man could not adequately write an entire text on such a huge field as thoracic surgery. To be of merit, his statements would have to be backed with experience. The time required by such an active practice would not allow him to adequately cover all subjects in all details. Rather the individual chapter is much better suited for the clinician to express his own views and findings.

The illustrations are excellent, the bibliography is certainly adequate. It is a pleasure to see a bibliography on each subject. With the present-day high costs, this is too often a feature omitted by the publisher, and yet it is a feature which is necessary for completeness.

George William Ware, M.D.

First Aid, Diagnosis and Management, 5th ed. Warren H. Cole, M.D., and Charles B. Puestow, M.D., with 16 Contributing Authors. Price, $6.25. Pp. 420. New York: Appleton, 1960.

Time there was when the first aid care of casualties in considerable numbers was largely the prerogative of the Army Medical Corps. In this nuclear-missile age, however, it falls to the lot of the now vulnerable civilians to have a working knowledge of first aid needs that extend far beyond the ubiquitous triangular bandage.

Drs. Cole and Puestow, in bringing this very excellent book on first aid up to date, have, of necessity, included with all of the time-tested first aid measures such additional information as the handling and early care of radiation casualties, and the appropriate antidote for sternutators and nerve gases.

This compact, yet comprehensive, survey of first aid advice, covering 420 pages, is directed, perhaps, primarily to provide guidance for the intelligent lay reader in the preparation of his most important contribution to the public welfare in time of emergency. It appraises him in lucid terms of the limitations of limited knowledge. Nonetheless, the book is replete with not only up-to-date advice for all physicians, but contains such cogent reminders as this verbatim report from page 1: "However, emergency conditions are so complicated and time for deliberation so short that first aid therapy is often carried out erroneously, even by physicians. Accordingly, there will presumably always be a need for training in first aid, particularly since such a great variety of emergency conditions may be encountered."

With the development of scientific methods of human destruction, not only must physicians cope with automobile and airplane crashes at home, but we cannot dismiss the thought that they may one day be dealing with disaster which can come silently and suddenly from outer space. In all disasters, adequate, early and appropriate first aid is in itself life-saving.

This is an excellent addition to any library and particularly useful for the medical student about to embark on his first experience with emergency room care.

Allan M. McKelvie, M.D.

Management of Hypertensive Diseases. Joseph C. Edwards, A.B., M.D., F.A.C.P., F.A.C.C. With Foreword by Paul Dudley White. Price, $15.00. Pp. 439, illustrated. St. Louis: Mosby, 1960.

Hypertension represents one of the commonest entities the medical practitioner deals with.

The book is undoubtedly the most comprehensive review of all aspects of hypertension the clinician deals with. For example, chapter 7, Special Problems in Management, goes from thiazide drugs to adrenalectomy. Chapter 10 reviews in detail antihypertensive drugs.

This book encompasses all applicable clinical aspects of hypertension to the time of going to press. There will be constant additions from that date on.

The author seems to aim his volume at the busy practitioner. It seems to me that this is a wonderful idea but too great an expectation, since he, the busy practitioner, must look for more concise material. The painstaking student will use the book.

Marcel J. Foret, M.D.

Health Education. A Guide for Teachers and a Text for Teacher Education, 5th ed. Bernice R. Moss, Ed.D., Editor; Warren H. Southworth, Dr.P.H., Associate Editor; and John Lester Reichart, M.D., Associate Editor. Project of Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association with the coöperation of contributors and consultants. Price, $5.00. Pp. 429. Washington, D. C.: National Education Association, 1961.

This small volume, written by a committee of educators and physicians and containing a wealth of material in readable form, is impressive as an example of the interdisciplinary approach to the "whole child." While primarily directed toward orienting the teacher in the

(Continued on page 30)

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Book Reviews

(*Continued from page 28*)

development of health education curricula, mostly in nontechnical language, there is much to interest the physician.

The sections on physical and behavioral development, school attitudes, and attitudes toward society at various age levels aggregate material rarely found in a single work. There is also much to interest the physician in the sections on the planning of health education courses at various grade levels.

Throughout, proper emphasis is given to the problem of accidents and safety education. Reference lists cover a wide range in both medical and educational literature.

The reviewer regrets having missed the first 4 editions of this work and hopes that the modest price will ensure its wide circulation among both medical and paramedical persons involved in child care.

ALLAN B. COLEMAN, M.D.

House of Healing. The Story of the Hospital. MARY RISLEY. Price, $4.50. Pp. 288. Garden City, N. Y.: Doubleday, 1961.

A famous man once wrote to his grandson: "I am writing a long letter to you today because I do not have time for a short one."

In the space afforded me to review "The House of Healing" I find that it is inadequate to do justice to the book, which is packed with descriptions not only of hospital evolution but with medical student education, hospital construction and management. There are archeological proofs that surgical instruments which we assume are modern were in use 4,000 years ago. Some of these instruments illustrate the book.

Babylonian temples where the sick congregated for treatment are described as the forerunners of the modern hospitals. Understanding of disease was good. It spread first to Egypt, and successively to Greece, Italy and Arabia. After A.D. 355 the pagan temples were closed and the first privately sponsored civilian hospital was founded by a wealthy Roman matron named Fabiola. Great hospitals in Rome, France and London are described. The reader is introduced to the men and women who were outstanding through the ages for their contributions to the physical welfare of humanity, and to how they left their lasting impressions.

Some of the amazing facts in "The House of Healing" are the following aids in healing which the author claims were in use in Egypt 4,000 years ago: anesthesia, antiseptics, general and plastic surgery, drugs, music therapy, psychosomatics, sun bathing, therapeutic baths, diet, etc.

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Medical schools were in operation in Egypt from the ninth to the twelfth century. In the twelfth century the famous hospital at Salerno, Italy opened its medical school and Roger (king of the 2 Sicilies) issued a decree requiring university attendance before entering the medical school, and 4 years of medical study as a minimum for earning a doctor's degree.

During the Middle Ages medical education declined, nursing was a menial occupation given over to the "sairy" groups, and hospitals became filthy tombs for more than 50 per cent of the patients. In 1658 the first hospital in the United States was built, and used principally for outbreaks of epidemics. In 1812 it was occupied by prisoners, insane and smallpox patients, and it was not until 1848 that it was used solely for patients. The name of the hospital was "Bellevue," which stands today as New York City Hospital.

My space is exhausted. You should read this book. It will add to your knowledge painlessly, increase your respect for mankind, and keep you humble.

JAMES A. GANNON, SR., M.D.

Stroke—A Study of Recovery. DOUGLAS RITCHIE. Price, $3.50. Pp. 192. Garden City, N. Y.: Doubleday, 1961.

The dust jacket accurately describes this book as "a vivid account of the author's physical and psychological rehabilitation after a paralyzing stroke." It actually is a detailed chronicle of day-to-day and literally minute-to-minute events, as well as the author's responses, reactions, and ruminations during his convalescence from hemiplegia accompanied by aphasia. His recovery is painfully slow, and so, often is the narrative.

Physicians will find little new or informative in this book and a great deal that is tedious.

HAROLD STEVENS, M.D.

MEDICAL ANNALS
of the District of Columbia

October 1961 VOLUME XXX • NUMBER 10

The Conservative Management of Genital Prolapse in the Poor-risk Patient*

ANDREW A. MARCHETTI, M.D., F.A.C.S.
Professor and Chairman of the Department of Obstetrics and Gynecology, Georgetown University School of Medicine

At times the words conservative and radical are misunderstood in medical parlance. Management is conservative when it is within safe bounds, when it adheres to sound principles, or when it is believed to involve little risk. The term "radical" concerns getting to the root of something and implies thoroughgoing or extreme management. It is clear, then, that we are dealing with degrees of extent, and it becomes obvious that the more extreme or extensive a surgical or medical procedure is the more it is fraught with risks.

Genital prolapse in this discussion will include prolapse of the uterus and prolapse of the vagina.

The poor-risk patient will be considered one whose general physical condition is abnormally altered to a degree that surgical trauma will not be tolerated except at a greater or more serious disadvantage.

Although genital prolapse, particularly uterine prolapse, occurs in the later years of reproductive life as well as in women past the menopause, its incidence in the poor-risk patient, as one would expect, is considerably higher among elderly women. Furthermore, since the life span of women continues to be lengthened, it seems reasonable to assume that the frequency of prolapse of the uterus and the vagina will increase. Atrophy, an accompaniment of advancing years, is considered to be one of the important etiologic factors in the development of prolapse. Because of the advances that have been made in all the branches of medical science, however, the poor-risk patient of today, although still a problem, is not the serious problem that she was a generation ago. Indeed, there are a few physicians and surgeons who currently find it difficult to admit that there are any patients who cannot be prepared to withstand an operative procedure.

Since I shall confine my discussion to the conservative treatment of the poor-risk patient with genital prolapse, it becomes necessary to evaluate the extent to which her general physical condition has been compromised and by what cause or causes. Most frequently, cardiovascular disease, renal disease, diabetes, anemia, under-nutrition and obesity will be found to be the complicating causes. To determine how much of a surgical risk a patient may be, certainly her age, weight, past history, current physical and mental status, anesthesia, and choice of operation must be considered. The consideration of these factors should be weighed against the factors which are basically associated with any surgical procedure, that is, time, shock, blood loss, and possible complications.

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* Read before the Section on Obstetrics and Gynecology on the Opening Day of the 1960 Clinical Meeting of the American Medical Association in Washington, D. C., November 28–December 1, 1960.

In this evaluation one need not stress how important it is to have the consultation and help of an internist and an anesthesiologist since it is self-evident. Aside from whatever other measures will be required to stabilize or improve the patient's general condition the gynecologist must make certain that the function and condition of the urinary tract have been completely studied by blood and urine analyses, cystoscopy, and excretory urography. After the study of the poor-risk patient has been completed and her general condition properly assessed the gynecologist makes his decision. It should be emphasized that in the course of investigating and preparing such a patient for operation, the alleviation of fear and the building of confidence in a successful outcome are paramount.

CHOICE OF TREATMENT

The patient with genital prolapse, usually complete, is referred to or comes to the gynecologist because she is more or less incapacitated and her existence is miserable. Should it be decided, after such a patient has been evaluated, that an operation should be withheld because she fears it or that in the judgment of the gynecologist and his consultants any operative procedure is direly contraindicated, relief must be sought from the use of a pessary. Although a pessary may afford some relief it is only temporary, the care associated with its use is troublesome, and at best it is soon realized that it is a poor substitute for surgical correction. McElin and Paalman[1] point out that there must be no uncertainty as to whether the patient will return at frequent intervals for removal, observation of the state of the mucous membranes, cleansing of the pessary, and reinsertion. The irritation and ulceration often accompanied by an offensive discharge resulting from the use of a pessary become most discouraging to the patient as well as her physician. Ultimately, in many instances, the patient will arrive at the point where she expresses her willingness to assume the risk of an operation for relief.

In my experience, and I believe that there is general agreement on this point, the most conservative operative treatment for genital prolapse among the poor-risk patients is a partial colpocleisis after the Le Fort type. It takes the shortest time to perform, is associated with the least degree of shock and blood loss, and may be performed under basal or local anesthesia. Occasionally a patient may develop partial urinary incontinence after this procedure, but TeLinde[2] points out that "this disadvantage can be avoided by closing only the upper two-thirds of the vagina, stopping short of the area which underlies the vesical trigone and the urethra." A perineorrhaphy should supplement the partial colpocleisis to insure a better result. This operation is reserved only for women who no longer require a functioning vagina.

In the same type of woman with a prolapse of the vagina I would consider only as conservative treatment a complete colpocleisis. Although more extensive, it has the same advantages that the Le Fort operation has.

And now we should consider the patient who is a poor risk but whose general physical condition can be sufficiently improved in the course of preparing her for an operation so that the risk is diminished but not removed. This is the patient who is a moderately poor risk.

The choice under these circumstances is less restricted but is still limited from the aspect of conservatism. Several procedures might be considered in this sphere, preëminently among them vaginal hysterectomy and the Manchester operation. Today there is no question but that vaginal hysterectomy is most frequently chosen. There are some gynecologists who have become so enthusiastic about vaginal hysterectomy that in their judgment any other type of operation for genital prolapse would be considered outmoded. On the other hand, others feel that the Manchester operation still has a definite place in the correction of uterine prolapse. In addition, there are a few who would consider the Watkins interposition operation as a good procedure for the correction of uterine prolapse with a large cystocele in an elderly poor-risk patient. Currently our choice is made between vaginal hysterectomy and the Manchester operation.

Let us not lose sight of the fact that we are planning to operate upon patients whose general condition is moderately compromised. Therefore, the factors of time, shock, blood-loss, and the possibility of various complications continue to be very important. Other considerations which should influence the choice of operation in these cases are the degree of uterine prolapse, the condition of the uterus and the cervix, and the extent of symptoms and incapacity the patient has. The woman with a slight to moderate degree of uterine prolapse who is asymptomatic is in no need of surgical correction.

It might be well to recall and enumerate at this point some of the complications which may develop from various vaginal operative procedures, especially the more extensive ones. They are cystitis and pyelonephritis; injuries to the ureter, bladder, urethra and the rectum; vaginal cuff abscesses, parametritis and pelvic peritonitis; postoperative hemorrhage from the cuff, mucosal flaps or retracted vessel; broad-ligament and retroperitoneal hematomas; thrombophlebitis and embolism. Since these complications are serious enough when they occur in the patient who is a good risk, it is then readily appreciated how much more seriously the poor-risk patient will be jeopardized by them.

I use the Manchester operation in a few selected cases when, as TeLinde has indicated, there is a cystocele associated with a first or even second prolapse of the uterus and when a great part of the apparent prolapse is due to hypertrophy and elongation of the cervix. The Manchester operation is not complicated, it can be done in good time, there is very little shock associated with it, the peritoneal cavity is not entered, and there are no vascular pedicles to clamp and ligate as in a vaginal hysterectomy.

In cases of complete uterine prolapse or in other cases of symptomatic partial prolapse in which some benign alteration of the uterus or cervix warrants removal vaginal hysterectomy is used. In general, it can be said that our experience with this operation in the fairly poor risk patient has been satisfactory and the results have been good.

Because of the many added risks, the Spalding-Richardson composite operation, vaginal hysterectomy with added anterior and posterior colporrhaphy, and any combination of vaginal and abdominal procedure have no place in the conservative management of genital prolapse.

Comment and Conclusion

In his article on "The Vaginal Approach in Gynecologic Surgery," Edward Allen[3] states that this approach "is one of the safest, most satisfactory, least painful and disfiguring procedures in properly selected cases." It would be well to think a little more about the phrase "properly selected cases." The merits of the vaginal approach can be judged only by its final results. Inevitably these will vary, but in good gynecologic practice the final results, as Allen further comments, "will depend on preoperative diagnosis and preparation, technical skill, postoperative care, trained assistants, proper tools, adequate spot lighting, minimal anesthesia and direct vision." To this let us add sound

(*Continued on page 643*)

Gynecologic Problems and Hygiene of the Teenage Patient*

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THE ADOLESCENT AGE GROUP has until the last 10 years or so comprised a very neglected category of patients. We have actually rather few data concerning normal standards, particularly in regard to genital growth and development in the adolescent female. Worried parents and their daughters will often seek consultation concerning breast development, distribution of extragenital hair, and/or menstrual irregularities mostly because one daughter has varied in these matters from her sisters or friends. Amenorrhea, scanty menses, or excessive uterine bleeding need correction in the early to middle teens. The patient with a serious endocrinopathy must be identified as early as possible to give the best chance of restitution to normal function and development. Likewise, dysmenorrhea of the functional type often starts at the age of 15 or 16 when ovulatory cycles are established. The obvious need in this group of patients is to eliminate organic reasons for menstrual disability and to help to establish a good hygienic pattern for the individual.

No matter which complaint this patient presents, as an adolescent she is now beginning to form independent attitudes and judgments, and her visit to any physician presents a golden opportunity to establish rapport and to gain an understanding of her own physiology and the need of the preventive approach to her problems. The pediatrician has long emphasized periodic examinations and preventive measures. The adolescent, on reaching the age of 12, usually ceases to be under the care of a physician with such an approach. It is only comparatively recently that adolescent "clinics" have been activated in a few teaching hospitals. As puberty is reached, the development of secondary sex characteristics with marked changes in body configuration and in emotional content causes considerable worry for many girls. The psychologic desire for independent action conflicts with the comfortable pattern of familial habit and the security of parental dictation and approval. This conflict is productive of anxiety in the adolescent because her need for approval and for reassurance is very real. One of the first stirrings of psychologic growth comes when approval of her friends and contemporaries becomes more immediately important than the approval of her family. It is always significant in conducting an interview with a 15- or 16-year-old girl when the mother insists on answering all questions. It is certainly essential to hear the mother's story, particularly to obtain details of childhood illness and growth, also to hear the adult side of any familial disagreement. However, the first ingredient of rapport with a teenager is to give her your complete attention and to listen carefully to her complaints and to her difficulties. With a few judicious questions about her interests in school or outside, one can get most girls to talk freely.

A careful, complete physical examination is necessary in order to pick up endocrine and developmental stigmata. This should precede the abdominal, rectal, and/or vaginal examination of the genital tract. It is obvious that a painful examination will accomplish nothing useful, and the rectal examination in some girls will actually be more informative. A question about the use of internal tampons at the menses will often bring the response, "Oh, I tried to use one but it hurt." This gives you an excellent opportunity for a careful explanation of anatomy. Most 15- or 16-year-old girls will coöperate with a gentle one-finger vaginal examination, but it may be well to defer this until a second or third office visit. Obviously, the male physician must be chaperoned during any general examination of a teenage girl. Adequate drapes and the use of a small, narrow but long instrument such as the Huffman pediatric speculum will usually enable the cervix to be visualized. As in examination of the pediatric age group, or of a frightened individual of any age, one must talk constantly and explain what is being done and why. It should be remembered that, because of the anxiety concerning body change, the thing that this girl wants most to hear is that she is normal. In this age group especially the adolescent wishes to be exactly like her friends in all things. If she has any ailment it is most reassuring to hear that she is not the only one with this complaint. It is also true that unless you have considered her individual problem and given her a reasonably complete examination, the intelligent teenager will not accept your reassurance that "she will outgrow her troubles."

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* Read before the Section on Obstetrics and Gynecology on the Opening Day of the 1960 Clinical Meeting of the American Medical Association in Washington, D. C., November 28–December 1, 1960.

To return to our major categories of difficulty in this group of patients, we should first consider the variants in growth and development. The establishment of regular monthly bleeding occurs usually between the ages of 11 and 16, with the average age given as 13. The most important factor in determination of this age appears to be nutritional. In reviewing series from various countries, race and climate do not appear as important as do the economic and nutritional state. Tanner,[1] in England, has described the sequence of events in the development of the female at puberty and in early adolescence.

It is interesting to note that the age of arrival at the mature state of development of breasts, pubic and axillary hair is recorded as 6 to 12 months later than the onset of the menses. To give an example of the usefulness of these observations, we will suppose that a girl of 16 is worried about what she feels to be the slow development of her secondary sex characteristics. If she has only just settled down to a regular menstrual pattern, she may be justifiably encouraged to expect further development over at least another 6 to 12 months.

Concerning the size and shape of the uterus in the adolescent there is a dearth of recorded information. At the Woman's Medical College, over a 7-year period to 1957, 730 young women were examined prior to entrance to the Medical School and the Nursing School. The material was grouped into ages 17–20, 20–25, and over 25. One significant observation obtained was that the so-called mature pear-shaped uterus with a corpus to cervix ratio of 2 to 1 was found in only 25 per cent of the group under the age of 20 (207 examinees) and only 50 per cent of the 20–25 age group (409 examinees). Follow-up on a fair number of these girls has revealed that following matrimony they became pregnant promptly and have carried to term. The validity, then, of the concept of casting the blame for infertility on a "hypoplastic" uterus in the absence of true endocrinopathy is seriously open to question. The incidence of dysmenorrhea falls as the group gets older and the percentages of matrimony, childbirth, etc. are increased (table 1).

No position or anatomic size or shape of the uterus could be correlated in any way with the incidence of menstrual discomfort in the 730 examinees. This again challenges a concept which was previously current among many physicians.

Concerning abnormalities in hair distribution, the teenage girl and her older sister not in-

TABLE 1

Results of Student Examinations

730 Students Examined at Woman's Medical College, 1948–57

Number of Students Examined	Incidence of Dysmenorrhea by Age			Total
	17–20	20–25	Over 25	
207	38 (18%)			
416		54 (13%)		
107			9 (8%)	
				101 (13.8%)

frequently are concerned about excessive hair development. Dratman and her group in endocrinology at the Woman's Medical College became interested in trying to correlate the menstrual histories of 466 young women with variants in hair distribution and the time of onset of these in relation to the menarche (table 2).

TABLE 2

*Analysis of 466 Cases (Women Aged 20–35 Years)**

	Normal Menstrual History; Normal Secondary Sex Characteristics		Somatic Development and Menstrual History Suggesting Hypo-ovarianism	
	No. of Cases: 388		No. of Cases: 78	
	No.	Per cent	No.	Per cent
Normal hair	120	30.9	30	38.4
Slight hirsutism	140	36.1	28	36.0
Marked hirsutism	128	33.0	20	25.6

* Courtesy M. B. Dratman, M.D.

Of the 466 cases reviewed 388 had normal menses and normal development of secondary sex characteristics; 78 of the 466 cases had suggestive evidence of hypo-ovarianism. It will be seen that the percentage of hirsutism is approximately the same in both groups. The patients with unwanted hair of a mild degree reported this development usually within 1 to 5 years of the onset of menses. The markedly hirsute group, however, developed the excessive hair with the menarche or within 1 to 2 years after establishment of regular menses. There were no other masculinizing features present and, although the numbers are not large enough to be statistically significant, no variation in fertility was apparent as the older members of the group were questioned. Since hypo-ovarianism in this connection does not seem to be significant, one must think of familial and congenital factors and of adrenal variants. Possibly the hair follicles may be hypersensitive to normal levels of 17-ketosteroids. In marked deviations from the normal distribution an endocrinologic survey is indicated in adolescence because careful cortisone therapy may be helpful. This should not be given in this age group without expert evaluation and supervision.

The variants in patterns of menstrual bleeding at the menarche are many and most of them are not significant. Most girls have anovulatory cycles for the first 6 to 18 months of bleeding as indicated by basal body temperature studies. Most girls do not have excessive or even very irregular bleeding during this time. Those who do often respond to increased rest and anti-anemic therapy. For the occasional girl who really floods, prompt and decisive action is necessary. A few girls will be found to have hemoglobin levels as low as 7 to 8 Gm., so that the first step in treatment should be the evaluation of the blood count. These patients must be given prompt blood replacement and should be hospitalized. Conjugated equine urinary estrogens (Premarin), 20 mg., may be given intravenously and repeated in 6 to 12 hours to control the hemorrhage. If this is not effective, a dilation and curettage should be done. Cyclic therapy of oral estrogen (such as Stilbestrol, 0.5 mg.) should be started on days 1 to 25 with overlapping of progesterone. One product is medroxyprogesterone acetate, 10 mg. (Provera), on days 15 to 25 with cessation of all medication for 5 days. This cyclic therapy should be repeated for 3 to 6 months after an episode of severe bleeding in order to allow the youngster to recover her pituitary balance and establish her own pattern of regularity.

If the monthly bleeding has been only mildly to moderately prolonged, anemia should be actively treated and a high-protein, high-vitamin diet advised. If vaginal smears indicate adequate estrogen production, the use of oral cyclic premenstrual progesterone alone may be all that is needed to correct the disorder. It is obvious that a general examination must be done including a complete blood count to rule out blood dyscrasias plus an evaluation of the genital tract to eliminate functioning or other ovarian tumors.

In the reverse, the total amenorrhea in adolescence will constitute a different and often not so easily amenable problem. Dietary fads, psychogenic upsets, anemia, and other general health aberrations should be ruled out here also. The rare congenital anomaly, such as imperforate hymen, absence of the uterus, etc., can be eliminated by physical examination. In the acquired amenorrhea group particularly the likelihood of pregnancy must always be considered even in adolescence. If the total growth pattern of the patient including development of secondary sex characteristics seems immature by the time the girl reaches the age of 15 and she is totally amenorrheic, a thorough medical evaluation is indicated. This girl may merely be suffering from delayed puberty. The familial history will often give a background of this probability. The important aspect to realize is that hypo-ovarianism may be associated with hypo-adrenalism and hypothyroidism on the basis of hypopituitarism. There is a real hazard in giving replacement thyroid therapy without adrenal evaluation, since replacement therapy for one gland alone may lead to adrenal crisis. In girls with short stature in whom further linear growth is desirable, injudicious administration of estrogens may close the epiphyses of long bones and so prevent accomplishment of further growth. It is obvious that not all of these girls present severe endocrinopathies, but it is important to identify early those who do. The combination of clinical evaluation of the patient with basic laboratory studies is necessary for an accurate endocrine diagnosis. The intention here is only to indicate that haphazard endocrine therapy may be worse than no therapy.

Southam[2] has followed a large clinical series of abnormal bleeders over a period of years. She presents evidence that girls with repeated difficulty during adolescence continue this pattern into adulthood. The fertility record in these patients is less good than the average. The outlook is particularly gloomy when repeated curettage has been necessary to control bleeding. Some of these patients may require wedge resection of cystic ovaries to establish normal cycles. All of these girls should have careful endocrinologic evaluation prior to operation, and the timing of the procedure should be such as to enhance fertility. These serious problems fortunately are rare, and most youngsters require little therapy to regulate the establishment of normal patterns.

In the adolescent age group the primary or functional type of dysmenorrhea far outweighs the so-called secondary or acquired group in incidence. This last is seen increasingly with advancing age. Discomfort accompanying or preceding menstrual bleeding is usually described as cramping in character and may be noted as lower abdominal pain, backache or pelvic pressure. Less frequently there may be nausea and vomiting, gaseous indigestion, constipation, diarrhea, and pain in the legs. The group of symptoms caused by salt and water retention, which we think of as the premenstrual tension syndrome, may also occur in adolescence but does not necessarily accompany the cramping pain. The usual history in the adolescent reveals that the first few periods have been painless and that it is not until regular ovulatory cycles are established that the problem becomes important. Since dysmenorrhea is second only to the common cold as a source of female absenteeism in educational endeavors and in industry, this becomes very significant in relation to individual efficiency. There should be no objective pelvic lesion in the functional group. It is, however, exceedingly important to eliminate organic disease before assuming the difficulty to be functional, especially when the symptoms are repeated and progressive. The occasional girl will have a congenital anomaly of the genital tract, pelvic inflammatory disease, which may be tuberculous, an ovarian neoplasm, benign or malignant, or pelvic endometriosis. Occasionally a pelvic appendix will cause symptoms at the time of the periods. One case report should make this point.

A small statured girl with feminine habitus started her periods at the age of 15½ years. For the year before the age of 19, when she was first seen, she was having increasingly severe dysmenorrhea with left-sided pain. She had been treated by her family doctor for pelvic inflammation, and her symptoms seemed to subside promptly with the use of antibiotics. When the situation recurred monthly, consultation was asked. On examination the uterus was found to be pushed to the right by what seemed to be an adnexal mass the size of a small grapefruit. Typical nodular implants of endometriosis were felt on the uterosacral ligaments. In view of the size of this mass it was decided to advise a diagnostic curettage and exploratory laparotomy. There was hematometra and hematosalpinx in the left half of a double uterus. There was no connection from the left half of the uterus to the cervix, so that all menstrual blood and detritus drained backward into the peritoneal cavity. Typical endometriosis was found on the surface of both tubes and ovaries and in the cul-de-sac of Douglas. An endometrioma almost replaced the left ovary. Removal of the complete left side and cauterization of implants gave her complete relief of symptoms. She subsequently married, became pregnant, and by cesarean section has had a 5 lb. boy. An intravenous urogram revealed the presence of only 1 kidney. Cystoscopy showed no evidence of a left ureteral orifice in the bladder.

This case reëmphasizes the fact that, when major anomalies of the genital tract are present, the urinary tract must also be investigated. Treatment of other organic lesions will vary with the etiology of the lesion. Early accurate diagnosis is the important need.

To return to the functional group of dysmenorrheic patients, about a dozen theories of etiology have been enthusiastically propounded by their authors. It is probable that more than one factor may play a part in any given case. The major suggested causes are cervical stenosis, pelvic congestion, vascular spasm, irritation of nerve endings, neuritic pain, muscle spasm, and psychiatric factors. The fact that anovulatory cycles are in general painless has not yet been satisfactorily explained. It must be obvious that any repetitive pain which comes once a month must have psychologic overtones from mere repetition. There is no doubt that some individuals have a low threshold to pain of all sorts. It is most important not to establish the monthly periods as an illness in the mind of a pubertal girl. Some girls are terrified by the sight of blood when no one has explained or warned them concerning this impending event. This possibility seems remote in 1960, but it still happens.

The first problem when called to see a youngster who is writhing with pain is obviously to be reassuring and to deal with the pain. Rest, abdominal heat, and the use of oral codeine and aspirin compounds will usually relieve the situation. If the girl is vomiting, codeine, 60 mg., given intramuscularly will take care of the acute situation. Pentobarbital sodium, 200 mg., by rectal suppository may also be helpful. Repetitive injections of narcotics are very dangerous because of addiction possibilities.

The patient should then be instructed to come to the office for complete examination and preventive therapy prior to the next period. It must be remembered that this management is going to be time-consuming and must be detailed if it is going to work. A careful history and physical evaluation with explanation of physiology and anatomy are essential. Anxiety concerning the unknown is important with many of these girls. When organic pathologic findings are eliminated, one can be truly reassuring and start the girl on premenstrual mild sedation or tranquilizers and antispasmodics. These must be taken for 3 or 4 days before symptoms are expected in order to give the best results. Attention to bowel habit, exercise when indicated, increased sleep, and relief of tension are also fundamental. At least 4 months of this sort of management must be tried. If these means are not effective, the production of anovulatory cycles with estrogen or the 19 nor-progesterone group should next be tried. Dosage of any one of these should be given from day 1 to day 25 of the cycle. In the event that simple therapy and the trial of hormones are ineffective, a diagnostic curettage is indicated. An unrecognized stenosis, polyp, or septum may be found. Hysterosalpingography may be useful in this group but is rarely necessary in the adolescent unless used to eliminate a congenital anomaly.

Assuming that a satisfactory regimen has been found, this must be continued for at least 6 months to break up the pattern. If this is done, it is very rare that major surgery such as presacral neurectomy section of the uterosacral and infundibulopelvic ligaments to sever nerve fibers will be necessary in the absence of organic disease.

Rapport with the patient is essential, and one cannot get impatient with the family or the youngster. If one gets to know them well enough the rare case which truly needs psychiatric help will be identified. The schizophrenic must be referred and treated early for best results.

It is very rare to find the parasitic vaginitis group in the adolescent patient. The monilial infestation is not infrequent prior to puberty. However, establishment of menses and an acid vaginal pH seems to reduce this incidence. If found, the condition is treated as in the adult.

In summary, the adolescent girl is physically a woman and often emotionally still a child. It is the duty of the physician to help her to mature with an understanding of her special anxieties and needs. Much can be done at this age to instill good health routines and mature attitudes toward marriage and childbearing. Although the premarital physical examination is essential, actually proper explanation and hygiene should have been started at the menarche. Since many parents will not themselves provide adequate instruction, the physician should be prepared to take on this aspect of preventive medicine.

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The Clinical Application of Vaginal Cytology*

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VAGINAL CYTOLOGY has developed into a valuable tool for the study of many questions related to female physiology and pathology. Infertility, abortion, post-maturity and qualitative female hormone evaluation are only some of the problems in which vaginal cytology is considered to have value. Its clinical application to these problems has had a limited acceptance. By contrast, the cytologic method in the detection of genital cancer is widely utilized.

Insufficient emphasis has been placed on the importance of a careful technic in the collection of a more complete specimen for cytologic interpretation. The highest detection rate of early uterine cancer will be achieved by the physician's clear understanding and proper clinical application of an accurate cytology report. It is because of these convictions that this paper is presented.

SPECIMEN

The method of smear preparation should be geared to the recommendations of the laboratory of choice. Each laboratory has its own preference for specific methods of collection, handling and processing the cytology specimen. The following technics are used by us.

Cervical smear. Following exposure of the cervix with a nonlubricated speculum any gross discharge is gently removed with a cotton swab. A wooden spatula of the Ayre type is placed in contact with the cervix and a scraping is made from the entire circumference (figure 1).

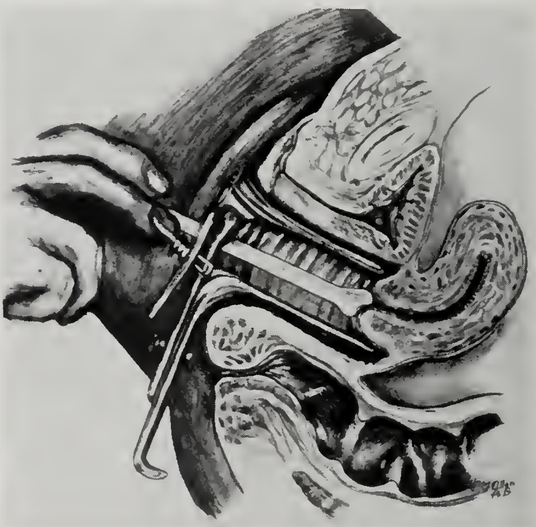

FIG. 1. Cervical scraping—an Ayre spatula is in contact with the cervix; a scraping is made from the entire circumference.

Immediately after collection the material is spread evenly on the mid-portion of a clean, clearly labeled glass slide. Properly used, this technic offers the best possibility of obtaining a complete sampling of the entire squamocolumnar junction.

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* Read before the Section on Obstetrics and Gynecology on the Opening Day of the 1960 Clinical Meeting of the American Medical Association in Washington, D. C., November 28–December 1, 1960.

Endocervical smear. The work of Fluhman,[1] Scott and Reagan,[2] and others indicate that many of the in-situ carcinomas arise either partially or completely within the endocervical canal. Ober[3] has shown that in younger women the endocervical glands are close to the external os. In the older age group they are found high in the cervical canal. We believe that no cervical specimen is complete without a sampling of endocervical material. If the physician is in doubt as to the adequacy of the material collected with the Ayre spatula the following technic is recommended. A small, firm, cotton applicator is inserted well within the cervical canal, twirled and then withdrawn (figure 2). The endocervical material is then rolled onto the mid-portion of a clean, clearly labeled glass slide. In those instances in which some degree of stenosis of the external os exists gentle dilation may be necessary to permit passage of the cotton-tipped applicator.

Endometrial aspiration smear. It has long been recognized that endometrial cells obtained by aspiration are of definite value in the diagnosis of endometrial carcinoma.[4–7] Adequate endometrial material may be obtained by the technic described by Papanicolaou and Marchetti[8] and by Cary,[9] with the use of a 5 c.c. control syringe attached to a 4½ inch, small-gauge, malleable antrum cannula.

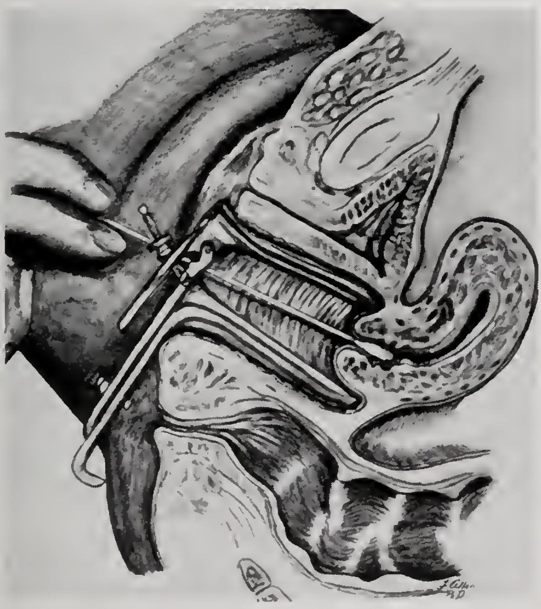

FIG. 2. Endocervical smear—an applicator is placed high within the cervical canal, twirled and withdrawn.

After a careful bimanual examination to determine the axis of the uterus the cervix is exposed and cleansed. The cannula is then inserted to 1 cm. inside the internal os (figure 3). Aspiration is done at this position to assure a specimen of exfoliated cells from the entire uterine cavity. If difficulty is encountered in passing the cannula the canal should be dilated by passing a small uterine sound. Strong negative pressure is made with the finger-controlled syringe while the tip of the cannula is gently rotated. The negative pressure is slowly released prior to the withdrawal of the cannula so that contamination of the pure endometrial specimen can be avoided. Following withdrawal, the syringe is detached from the cannula and filled with a column of air. It is then reattached and the endometrial material is forcefully ejected and evenly spread on a glass slide.

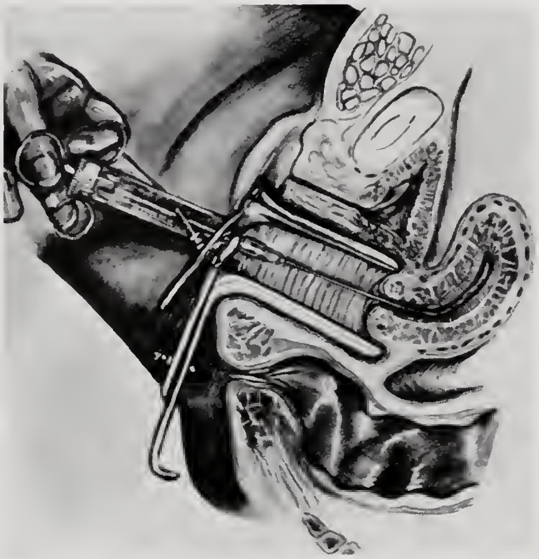

FIG. 3. Endometrial aspiration—a malleable antrum cannula is inserted to 1 cm. inside the internal os; aspiration is done at this position to assure a specimen of exfoliated cells from the entire uterine cavity.

General Considerations

The reliability of cytology as a cancer detection tool depends largely upon the quality of the specimen sent to the laboratory.

In addition to using meticulous technic in obtaining the specimen, the physician should give careful attention to its proper labeling, fixing and preparation for delivery to the laboratory.

We prefer fixation of all types of smears in ether-alcohol solution as originally suggested by Papanicolaou.[10] The slides should be fixed immediately and left in the solution at least 20 minutes.

A more accurate and helpful laboratory report may be expected by the physician if the cytologist is supplied with the patient's age, last mentrual period, and other pertinent clinical information.

Certainly no laboratory should be expected to furnish a reliable report on a poorly prepared or improperly labeled specimen.

Interpretation of Report

The method of processing smears varies according to the preference of the individual laboratory. Simple stains such as hematoxylin-eosin or acridine orange enjoy a certain popularity. However, the most widely used stain in clinical cytology is some modification of the polychrome stain of Papanicolaou.[10]

Regardless of the stain, the classification used in the cytology report is dependent upon the degree of variation in cell structure. It is generally accepted that the greater the degree of histopathology found, the more bizarre will be the exfoliated cells in the corresponding smear.

The Papanicolaou classification is an internationally accepted method of reporting smears. We prefer this classification because of its clarity and wide acceptance. A more simplified method of reporting classifies smears as negative, suspicious, or positive. These 2 methods of reporting can be compared as follows: Smears reported as negative are similar to Papanicolaou Class I and Class II; those reported as suspicious correspond to Class III; and those reported as positive for cancer include Class IV and Class V.

In our experience approximately 1 to 3 per cent of routine smears are classified as Class I. They are negative for cancer or any other pathologic finding.

Between 65 and 75 per cent of all smears fall into the Class II-a category. This report usually indicates a mixed bacterial infection but may also indicate the presence of trichomonads and yeast. A Class II-a report is negative for cancer.

Usually 10 to 25 per cent of routine smears are classified as Class II-b. Variations in cellular size and staining properties, nuclear eccentricity, cytoplasmic abnormalities and keratinization are found in these smears. Such minor atypism may be associated with metabolic and hormonal abnormalities as well as with genital infections. These smears are negative for cancer.

Approximately 2 to 5 per cent of routine smears are Class III. These smears are so reported because of the equivocal or borderline characteristics of the cells. True Class III cells may come from the edge of a malignant lesion or from benign tissue showing highly atypical histologic changes. In some instances marked infection and abundant cellular débris may make the interpretation of the smear uncertain. Under such circumstances these smears are usually reported as Class III and a repeat smear is requested. If accurate cytologic evaluation is to be made, it is imperative that the physician treat the local infection before repeating smears.

The Class IV smear is positive for cancer. It is so reported because the malignant cells seen are scattered. The Class V smear is positive for cancer and is so classified because the malignant cells occur in groups or clumps. Positive smears comprise 0.2 to 0.5 per cent of routine smears.

Discussion

The clinical application of vaginal cytology to the detection and diagnosis of early cancer is the responsibility of the physician. Once an equivocal or positive cytology report has been received, certain steps must be taken to arrive at an histologic diagnosis. These steps usually consist of a careful pelvic examination, multiple punch biopsy or cold-knife conization of the cervix combined with fractional curettage of the endocervix and corpus. If the histologic findings confirm the cytologic report, indicated therapeutic measures must be undertaken. Regardless of the therapy selected, patients with proven cancer should be followed indefinitely by cytologic studies for the purpose of early detection of any recurrence.

If there is no correlation between the original cytology report and the pathology report, repeat smears should be taken. A repeat cytologic survey should include vaginal, cervical, endocervical and endometrial aspiration smears. If the original cytology report is confirmed by the repeat smears, one should recognize the possibility of a mistaken pathologic diagnosis. Hofmeister[11] emphasizes that insufficient tissue sampling or an error in evaluation of tissue changes in the biopsy specimen may account for a lack of correlation between the cytologic and histologic reports. Iklè[12] and Papanicolaou[13] and others have observed that occasionally in the diagnosis of endometrial carcinoma positive smears persist in spite of repeated negative tissue reports. Certain regions such as the top of the fundus, the cornua, and the anterior uterine wall just above the internal os may be hard to reach or inaccessible to the curette.[14] These same areas of the uterus, however, can exfoliate cells which may be recovered on the endometrial aspiration smear. Occasionally malignant lesions of the tube or ovary may be the source of persistently positive cytologic reports. In very rare instances positive smears may result from malignant lesions in remote areas of the abdominal cavity.[15] Vaginal cytology is highly accurate in cancer detection. We agree with Nelson,[16] who thinks that all persistently positive smears in the face of negative tissue reports should continue to be investigated until each and every case has been resolved to the satisfaction of the clinician, the pathologist and the cytologist.

Although there has not been agreement as to the merit of routine screening of pregnant patients, Carter et al,[17] Ferguson and Offen,[18] Hofmeister et al,[11] and others believe that it has great value. Since many women seek medical care only because of their pregnancy, it would seem illogical to miss this opportunity of screening a large segment of the female population. Regardless of whether definitive diagnostic measures are taken during or after pregnancy, the clinician, by possessing an equivocal or positive cytology report, would be alerted to the existence of a potentially serious problem.

Cancer control committees agree that the best method of controlling cancer is early diagnosis and prompt, adequate therapy. The value of cytology as a screening method for the detection of unsuspected cancer is well established. Theoretically, the expected rate of cure of carcinoma-in-situ (stage O) approaches 100 per cent. Thus, by the clinical application of the cytologic method to all adult women, death from cancer of the uterus is largely a preventable disease. To achieve this objective, the medical profession has a two-fold responsibility. First, there must be a wider acceptance and clinical application of the cytologic method. Likewise, it is the clear responsibility of all physicians to participate in educating the public to seek periodic health examinations.

SUMMARY

Insufficient emphasis has been placed on the importance of a careful technic in the collection of a more complete specimen for cytologic interpretation. The physician's clear understanding and proper clinical application of an accurate cytology report will result in the highest detection rate of early uterine cancer. By the clinical application of the cytologic method to

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The Diagnosis and Management of Vulvar Lesions*

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THE VULVA is one of the most sensitive areas of the body surface. Not only is it the site of local infections and tumors, but it often reflects the reactions of the skin to systemic disease.

Contamination, moisture, warmth, and trauma increase the metabolic needs of the vulvar epithelium. When body resistance is lowered the vulva becomes a vulnerable area for skin disorders.

Subcutaneous areolar tissue, folds of epithelium, and many blood and lymph vessels permit great swelling of this area. Edema displaces and distorts nerve endings in the dermis and gives rise to itching and pain.

In the clinical history of patients with vulvar lesions the following are important:

1. Character of the onset of symptoms, such as itching, edema, nodule formation, ulceration, discharge, and bleeding
2. Duration
3. Infectious contacts
4. Menstrual function
5. Diurnal variation of symptoms (External irritants are usually most noticeable during the day, while itching from diseases of internal origin is frequently more intense at night.)
6. History of skin reactions to substances such as medications, disinfectants, soaps, ointments, nail polish, douching materials, and clothing
7. Identification of the exact site of symptoms, sometimes best accomplished by having the patient digitally indicate the area.

For every patient with vulvar disease, not only is a careful pelvic examination indicated, but the lips, mouth, tongue, hairlines, breasts and back should be examined for epithelial lesions similar to those of the genitalia. Skin lesions such as psoriasis, lichen planus, and herpetiform infections, easily recognized elsewhere on the body, may be distorted on the vulva by ulceration and secondary infection. When these dermatologic conditions involve the vulva the most characteristic lesions are seen on the periphery of the external genitalia or upon the thighs.

Multiple infections of the vulva are so common that a systematic method of investigation is essential to an accurate diagnosis. This is particularly true for venereal diseases. With modern specific therapy all that remains for the eradication of venereal disease is coöperation of the patient in reporting symptoms early, adequate investigation of contacts, accuracy of diagnosis, and complete treatment.

Some of the lesions which may be seen in daily practice are as follows:

Trichomonas vaginalis infestations of the vagina occasionally give rise to inflammation and superficial ulceration of the vulva, particularly of the inner aspects of the labia minora. Diagnosis is made by hanging-drop examination of the typical frothy vaginal discharge and by ruling out other causes of vulvar ulceration. Treatment of the vaginitis and associated vulvitis should be directed toward improvement of the patient's general physical and mental health. The use of any one of a number of local medications will be effective provided anemia, avitaminosis and emotional distress are first corrected.

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* Read before the Section on Obstetrics and Gynecology on the Opening Day of the 1960 Clinical Meeting of the American Medical Association in Washington, D. C., November 28–December 1, 1960.

Mycotic vulvovaginitis is practically always associated with some reduction in body resistance and with associated ariboflavinosis. The most pathogenic offender is *Candida albicans.* The diagnosis is based on symptoms of vulvar itching and the presence of a white granular discharge covering a mucosal surface which is reddened and edematous. A hanging-drop preparation, to which 10 per cent sodium hydroxide has been added, permits visualization of strands of mycelium. Diagnosis is confirmed by culture of mycotic organisms.

Local treatment of monilial infections consists of the use of propionate jelly applied vaginally and to the vulva. Aqueous gentian violet, 2 per cent, has no greater advantage than the above material and has the added unpleasant feature of staining and discoloration.

Condylomata acuminata are papillary overgrowths of epithelial tissue on thin pedicles, produced by a virus infection. An odorous discharge and ulceration result. Diagnosis is confirmed by biopsy. Small condylomas may be treated locally with 20 per cent podophyllin in tincture of benzoin. Only the protruding portions of the condylomas are touched with the preparation. After the podophyllin has dried for about an hour the area should be washed with soap and water. Small lesions are easily removed in this manner.

For large, neglected, confluent condylomas therapy consists of reduction of secondary infection followed by electrofulguration or partial vulvectomy.

Herpes progenitalis is a disturbing condition of the vulva because of the accompanying pain. Around the labia minora the lesions often become confluent, ulcerative, and difficult to diagnose. Peripheral lesions show the typical small blister-like areas and patchy distribution. Nerve-block may be needed to relieve pain.

Local treatment with antiseptic compresses is somewhat soothing and helps prevent secondary infection. Chloromycetin and aureomycin have not proved of definite value.

Tuberculosis occasionally involves the vulva. Diagnosis is confirmed by biopsy, tuberculin skin test, and culture of *Mycobacterium tuberculosis.* Treatment consists of the use of streptomycin and para-aminosalicylic acid, followed by partial vulvectomy with wide excision of the involved area.

Traumatic lacerations and ulcerations readily become secondarily infected in the region of the vulva. Diagnosis of these lesions depends upon the history. Local antiseptics, with the occasional use of sulfadiazine or penicillin, bring about healing of acute traumatic abrasions.

Toxemia of pregnancy, especially with added trauma to the vulva, gives rise to tremendous edema of the labia. Diagnosis is made on the basis of pregnancy complicated by weight gain, blood pressure elevation, and proteinuria. The labia do not interfere with delivery. Aspiration of the fluid from the vulva facilitates recovery.

Uremia causes a type of vulvar ulceration, the edges of which are surrounded by crystalline salts of urea. In addition, hyperpigmentation of the vulva results from deficiency of vitamins B and C. Diagnosis is made on the basis of physical findings and blood urea nitrogen elevation. The urinary tract obstruction should be relieved and replacement therapy given with vitamins B and C.

Diabetes mellitus causes inadequate metabolism of carbohydrates and fats. Excessive utilization of carbohydrates rapidly reduces the supply of nicotinic acid and riboflavin. Diabetic patients are often obese. Obesity, poor metabolism, urinary dribbling, edema, and itching produce circumstances favoring dermatitis of the vulva.

Treatment of vulvar infections in these patients is directed first to correction of the diabetes, plus supplemental use of vitamins, particularly of the B complex group, and reasonable cleanliness. Various local applications may be used to combat the predominating surface organism. The important principle is not to add an irritating agent which will contribute further trauma to the already partially devitalized cutaneous structures. As soon as the diabetic deficiencies are corrected the surface epithelium will heal.

Pernicious anemia is accompanied by ulceration of the vulvar epithelium with a bronze hyperpigmentation of the adjacent skin. Diagnosis is based on history, blood count, and neurologic findings. When the deficiency of pernicious anemia is corrected, regeneration will occur in the area of tissue devitalization of the vulva.

Agranulocytosis, aplastic anemia, and acute leukemia cause peripheral vascular changes which result in deep, punched-out, oval areas of ulceration involving the vulva. The ulcers are covered by a thin grayish membrane and surrounded by very little induration or redness. Similar lesions are often seen in the oropharynx. Diagnosis is confirmed by complete blood count. Treatment is systemic rather than local.

Contact dermatitis results from local allergic sensitization to such things as drugs, soaps, and clothing which come in contact with the vulva. Initial reaction to a localized allergic dermatitis is edema, fissure formation, and itching, followed by secondary trauma from scratching. These lesions occur more often in older patients. Phenolphthalein, rectal ointments, douching materials containing phenol, perfumed soaps, poorly processed rayon, incompletely fixed dyes in undergarments, and nylon represent some of the materials to which the skin of the vulva may show local sensitization. The diagnosis is made on the basis of the history, trial, and elimination. After removal of the irritant, the skin of the vulva returns to normal.

Chronic atrophic dermatitis is a clinical syndrome in which the tissues of the vulva undergo a low-grade inflammatory reaction with associated atrophic and hypertrophic changes in the corium and epithelium. Thinning of the epithelium of the labia and constriction of the introitus is designated as kraurosis. Whitish thickening of the epithelium with excessive keratinization is designated as leukoplakia. Marked hyperkeratosis, acanthosis, distortion of the basal-cell layer, dilatation of the subepithelial vascular loops, hyalinization of the dermis, round-cell infiltration, and areas of atrophy are characteristic of this type of dermatitis.

While the etiology remains somewhat obscure, it is quite probable that there are two fundamental causes of chronic atrophic dermatitis of the vulva. Neurogenic, hormonal, nutritional deficiency and allergic theories suggest a subepithelial beginning for atrophic and hypertrophic changes which characterize the condition. Histopathologic changes suggest a disturbance in the vital metabolic zone between the capillary loops in the corium and the basal cells of the epidermis.

In another group of patients identical pathologic changes in the skin of the vulva can result from chronic external trauma. Compulsive habits of self-irritation of the vulva cause chronic dermatitis with cornified and ulcerative epithelium similar to that seen in patients with an internal metabolic disorder. Diagnosis is made on the basis of history, observation, and biopsy.

Treatment of atrophic dermatitis is directed to measures which reduce the inflammation, alleviate pain, improve cell metabolism, and remove permanently damaged tissues. Investigation of the stomach for achlorhydria, eradication of all foci of infection, and the use of high doses of vitamins A and B are of value. Patients showing the changes characteristic of lichen sclerosis et atrophicus, a type of collagen disease, respond well to the use of chloroquine phosphate (Aralen), 125 to 250 mg. daily. Local applications usually have limited effect. Hydrocortisone ointment and testosterone applications are sometimes helpful. In selected circumstances nerve resection is recommended to relieve pain and itching. When scarring causes symptomatic constriction of the introitus or when the vulva shows areas of ulceration or leukoplakia the involved tissues should be removed by wide excision. Roentgen therapy is contraindicated for chronic atrophic vulvitis.

When the condition can be attributed to a long-standing, self-inflicted trauma of the vulva, psychiatric treatment is of greater value than any form of systemic, local, or surgical therapy.

Benign tumors of the vulva such as sebaceous cysts, fibromas, lipomas, hemangiomas, neurofibromas, lymphangiomas, ganglioneuromas, hidradenomas, and pigmented nevi should be removed by complete excision and subjected to careful pathologic investigation.

Malignant tumors of the vulva make up about 3 per cent of all malignant lesions of the female genital tract. Approximately 90 per cent of vulvar carcinomas are of the squamous-cell type. Basal-cell carcinoma, adenocarcinoma, and sarcoma represent less frequent forms of vulvar malignancy. Sarcoma is usually a tumor of early life, while squamous-cell cancer of the vulva occurs in older women. Early symptoms include itching, burning, discharge, nodule or ulcer formation, and bleeding. Patients frequently report for examination in an advanced stage of the disease.

Extensive tissue destruction from such conditions as lymphopathia venereum, syphilis, and radiation necrosis predisposes to malignancy. In these conditions permanent, widespread damage to underlying tissues presents difficult problems in plastic surgery.

Extramammary Paget's disease, characterized by elevated, reddened, distinctly demarcated superficial ulceration, is accompanied by an annoying, tingling, itching sensation. Histologically the involved cells are characterized by large vesicular nuclei and cytoplasmic vacuolization. This lesion is fundamentally an adenocarcinoma of the apocrine glands.

Bowen's disease is diagnosed by biopsy of an area of ulceration. Sections of the vulva show multicentric areas of intra-epithelial cancer. Vulvectomy during pregnancy is accomplished by greater blood loss than in the nonpregnant patient. However, pregnancy progresses to full term with spontaneous delivery of a living infant after vulvectomy.

Pigmented nevi of the vulva should be removed by wide local excision. Junctional nevi of the vulva are precursors of melanocarcinoma, a very different disease from squamous-cell cancer. Epidermoid carcinoma has a greater cohesiveness than melanocarcinoma. In both instances the cells are in contact with abundant lymphatic and venous channels. Cell-prickling is lost in melanocarcinomas, a factor which may contribute to the rapid and distant spread of malignancy. This melanoma, although widely excised and thought not to be malignant, in one case was followed by adenopathy 56 months later and by death 4 months after groin dissection.

The removal of invasive cancer of the vulva will vary with the surgeon. Whether ileofemoral lymphadenectomy is combined with complete vulvectomy or performed as separate operations, the important feature in therapy is to completely excise the lesion and remove the lymphatic avenues of spread. Whenever feasible, vulvectomy and bilateral lymphadenectomy are done concomitantly in our clinic. An attempt is made to completely circumvent the lesion. Areolar tissue and lymphatics are left as undisturbed as possible to the overlying skin. The transversalis fascia is split; the round ligaments are ligated and excised; and the iliac vessels are exposed extraperitoneally and stripped of fat and lymphatic nodes from the iliac bifurcation downward. Poupart's ligament may or may not be divided. The saphenous vein is ligated, cut at its origin, and elevated with the underlying fascia until all fatty tissue and nodes are removed to the apex of the femoral triangle. A segment of the saphenous vein is removed with the superficial nodes. The vulva is com-

(*Continued on page 644*)

The Fractional Radioiodine (I^{131}) Uptake Test as a Measure of Thyroid Function*

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SINCE THE RADIOACTIVE IODINE uptake test was first found to be a useful measure of thyroid function, countless variations of the procedure have been devised, described, and used. The 24-hour uptake determination, however, continues to serve as the standard test in most clinics. During the past few years more than 350 fractional or gradient uptake studies have been performed in the Radioisotope Clinic, Walter Reed General Hospital. Each study consisted of 3 determinations. These were performed at 2, 5, and 24 hours following oral administration of from 5 to 10 microcuries of radioactive iodine. The usual methods of measuring radioactivity were employed and the per cent uptake calculated by comparing the number of counts obtained over the thyroid gland to the number obtained over a known standard.

In this study the uptake data of each patient were evaluated in the light of that patient's entire clinical and laboratory picture. In this manner an effort was made to determine the relative accuracy of the 2-, 5-, and 24-hour uptake values in reflecting the true state of thyroid function. By means of a record review of the history, physical examination, laboratory studies (exclusive of the radioactive iodine uptake), and follow-up evaluation, each patient studied at the clinic for an evaluation of thyroid function was classified as euthyroid, hypothyroid, or hyperthyroid. This finding was then correlated with the results of the fractional radioactive iodine uptake determination.

Two small groups of patients were omitted from the study. The first group included those patients whose state of thyroid function could not be categorized accurately, usually due to inability to obtain adequate follow-up studies. The second group consisted of those patients who had either an illness other than thyroid disease or who had undergone recent nonthyroid therapy which was believed could have affected the thyroid uptake studies. It should be stated that, although many euthyroid patients are included in the study, some suspicion of thyroid dysfunction generally was the reason for doing the fractional determination.

RESULTS

Not unexpectedly, considerable overlapping of uptake values at each of the test times is seen for the different states of thyroid function (table 1). Significant observations made from this study can be summarized as follows:

1. The patients determined clinically to be hypothyroid, although small in number, showed less than 13 per cent uptake at 24 hours. The 2- and 5-hour determinations encroached too

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* From the Radioisotope Clinic, Walter Reed General Hospital and Walter Reed Army Institute of Research, Walter Reed Army Medical Center, Washington 12, D. C.

readily into the euthyroid range to be of certain value.

2. In the hyperthyroid group an uptake of 21 per cent or greater was observed in 83.8 per cent of patients at 2 hours, while a minimum of 32 per cent uptake was seen in 88 per cent of patients at the 5-hour determination. At 24 hours, 84.2 per cent of the hyperthyroid patients were found to have uptakes of 50 per cent or more.

TABLE 1

Summary of Fractional Uptake Data

Diagnosis	Number of Tests*	Range (%)	Mean (%)	Standard Deviation	Mean ± 1.5 Standard Deviations
At 2 hours					
Hypothyroid	13	2–8	5.00	2.04	1.94–8.06
Euthyroid	148	4–24	10.10	3.64	4.64–15.56
Euthyroid (treated)†	42	2–20	10.02	4.20	3.72–16.32
Hyperthyroid	112	10–87	38.54	18.85	10.03–66.59
At 5 hours					
Hypothyroid	12	1–10	5.50	2.35	1.97–9.03
Euthyroid	139	7–41	16.46	6.27	7.05–25.87
Euthyroid (treated)†	42	5–30	15.21	7.19	4.42–15.21
Hyperthyroid	111	18–93	53.41	19.30	24.46–82.36
At 24 hours					
Hypothyroid	13	0–13	5.31	4.58	0–12.18
Euthyroid	147	12–62	29.54	11.60	12.14–46.94
Euthyroid (treated)†	43	3–42	26.40	9.81	11.68–41.12
Hyperthyroid	120	33–97	63.68	13.70	43.13–84.23

* The obvious discrepancies in numbers of tests at the different times result from the fact that only 2 of the usual 3 uptake determinations were performed in a few patients.

† Previously treated patients with thyroid disease, who are now considered euthyroid.

3. In the large clinically euthyroid (untreated) group, 100 per cent of patients showed uptake values of less than 25 per cent at 2 hours, 94.6 per cent of these falling between 6 and 19 per cent. At 5 hours the uptake value was between 9 and 25 per cent in 91.4 per cent. At 24 hours, 93.2 per cent of the group showed values between 17 and 44 per cent.

Discussion

It is relatively uncommon to have a serious diagnostic problem arise from the suspected hypothyroid patients. It is apparent from our data that the 24-hour determination is the most accurate in differentiating these patients from the euthyroid group (figures 1 and 2). This is consistent with findings in other studies.[1, 2]

Just as it is often difficult to separate clinically the hyperthyroid from the euthyroid patient, so the most troublesome area of overlapping uptake values exists between the hyperthyroid and the euthyroid groups. From our data, even using mean uptake values ±1.5 standard deviations (which should include approximately 85 per cent of a random population), at no time interval is there clear demarcation between normal and hyperfunctioning uptake values (figure 2). The clearest separation occurs at the 5-hour determination. The least clearcut differentiation is at 2 hours, with the 24-hour determination lying somewhere between the two.

In attempting to make the radioactive iodine uptake test more valuable in identifying the hyperthyroid patient, all forms of mathematical gymnastics have been applied to the basic data. As might be expected, results, in general, have remained disappointing. In this light it is interesting to note the mean uptake values as shown in figure 3. The most striking feature is the markedly greater slope of the hyperthyroid "curve" between zero and 5 hours compared with that of the euthyroid group; between 5 and 24 hours the "curves" of all 3 groups are not remarkably dissimilar. However, no matter what method of expressing the degree of slope was used, the values thus obtained were of no greater help in diagnosing the questionable hyperthyroid patients than were the simple 2-, 5-, and 24-hour determinations.

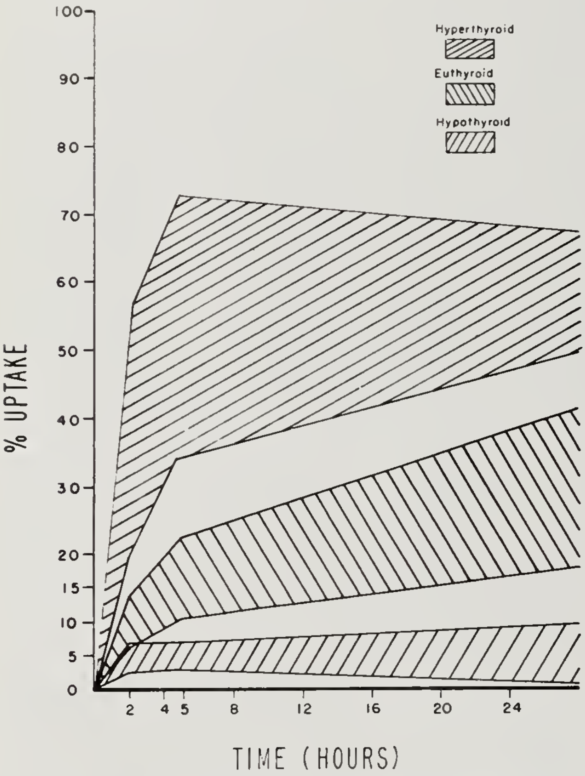

Fig. 1. Mean radioactive iodine uptake values ±1 standard deviation in hypothyroid, euthyroid, and hyperthyroid patients at 2, 5 and 24 hours.

As others have pointed out, the radioactive iodine uptake more accurately reflects the true state of thyroid function in some thyroid conditions than in others. For example, toxic diffuse goiter produces elevated uptake values more consistently than does toxic nodular goiter.[3] Another example of this variation may be seen in euthyroid patients with compensated hyperplasia of the thyroid gland, where the uptake test is not too valuable.[4] The accuracy of the test also is seen to vary at the different intervals as well. Such inconsistencies obviously detract from the overall value of the test. From examination of our data (table 1, figures 1 and 2), the radioactive iodine uptake test at 2, 5, or 24 hours may be expected to reflect the true level of thyroid activity in approximately 85 per cent of patients in a random general hospital population.

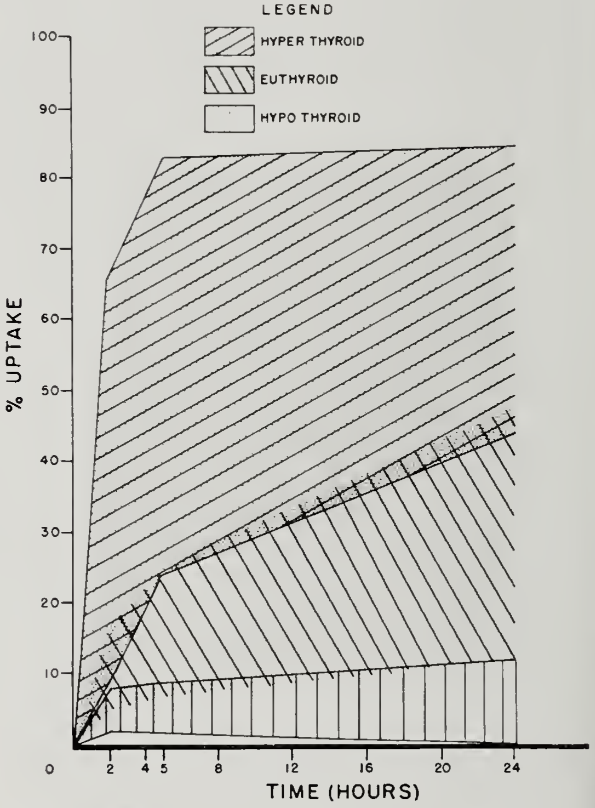

Fig. 2. Mean radioactive iodine uptake values ±1.5 standard deviations in hypothyroid, euthyroid, and hyperthyroid patients at 2, 5 and 24 hours.

The ranges of normal radioactive iodine uptake values are considered to be:

At 2 hours: 5 to 20 per cent
At 5 hours: 7 to 30 per cent
At 24 hours: 15 to 50 per cent.

Unfortunately, and as mentioned above, results often are obtained which are inconsistent with the clinical diagnosis. Many such "errant" values can be explained retrospectively and, perhaps more important, can be anticipated. In these cases, total clinical evaluation, including other laboratory means, must be used to reach the final diagnosis. Several types of patients exhibiting such paradoxical uptake values are described below:

1. Altered uptake values due to iodine-containing compounds, hormones, or other medications. These substances can depress the uptake test in patients with or without thyroid disease and at any time interval. The scope and duration of these effects have been described elsewhere in great detail.[5]

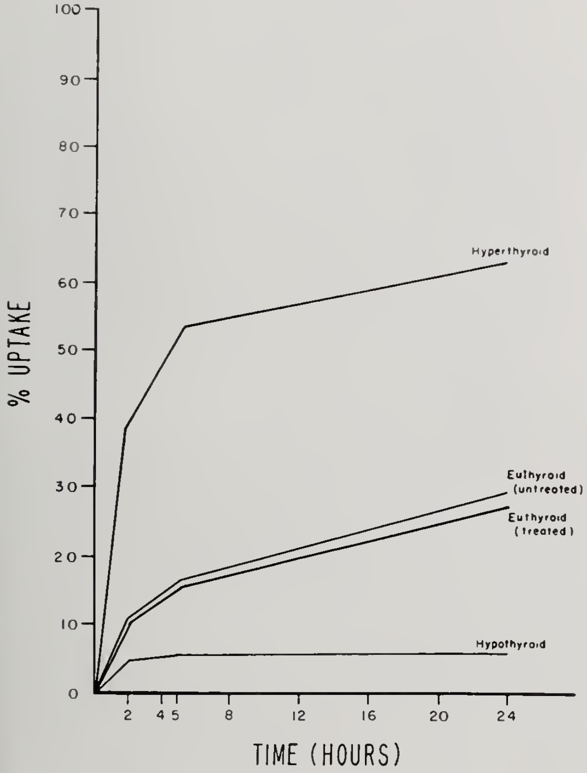

FIG. 3. Mean radioactive iodine uptake values in hypothyroid, euthyroid, and hyperthyroid patients at 2, 5 and 24 hours.

2. Unusually low uptake values in euthyroid patients following definitive therapy for thyroid disease. Therapy in these cases included previous thyroid surgery for various reasons, the administration of radioactive iodine in therapeutic amounts, or prolonged administration of antithyroid medication. The period of time from the date of therapy or termination of medication to the uptake determination in these cases was at least several months in all cases, which would seem to eliminate the acute effect of such procedures or medications. Among the euthyroid patients there were 10 who had uptake values below 5 per cent at 2 hours. Eight of these patients had received such therapy. Similarly, 12 of the 18 euthyroid patients having 5-hour values below 9 per cent had undergone prior therapy, while at 24 hours 8 of the 11 patients with uptake values below 15 per cent were in this category. The average uptake values in these treated individuals can be seen to be smaller than the values obtained in their untreated counterparts (table 1 and figure 3). Although this difference does not have statistical significance, the information may be of some value in interpreting results in a particular case.

3. Unusually high uptake values in euthyroid patients (table 2).

TABLE 2

Unusually High Radioactive Iodine Uptake Values in Euthyroid Patients

Patient	Uptake (%)			PBI	Effect of Exogenous Thyroid Extract on Uptake (Thyroid Suppression)
	2 hours	5 hours	24 hours		
1	11	20	58	2.8	Not performed
2	20	30	42	5.6	Uptake suppressed
3	19	41	56	4.5	Uptake suppressed
4	23	39	62	4.0	Not performed
5	9	24	64	8.6	Uptake suppressed
6	13	22	48	6.0	Uptake suppressed
7	24	38	56	6.1	Uptake suppressed

Despite these higher-than-anticipated values, arriving at the final diagnosis was not particularly difficult in these cases when all parameters of thyroid function were used. Needless to say, adequate history and physical examination were the most helpful. As in other clinics, thyroid suppression tests were also of considerable value in confirming the state of thyroid function.[6] Three of the 7 patients in this group were considered by the referring physicians possibly to be hypothyroid, the remainder probably euthyroid. The elevated uptake values obtained were therefore unexpected in all cases.

4. Unusually low uptake values in hyperthyroid patients. A relationship of depressed uptake function to earlier definitive therapy noted among some of the euthyroid group is also seen in a portion of the hyperthyroid group. Five of the 9 hyperthyroid patients with values below 16 per cent at 2 hours had been treated. At 5 hours, 8 of the 11 patients showing uptakes below 32 per cent, and at 24 hours, 5 of the 10 patients with values below 45 per cent fell into this category.

When the per cent uptake values are plotted against time, the 2-, 5-, and 24-hour values can become the points of a "curve." Although the sparsity of determinations does not permit the "curve" to be analyzed too minutely, a general concept of its contour may be obtained. In the course of performing fractional determinations, a great variation in these "curves" becomes apparent. Such variability is most dramatically manifested by the hyperthyroid group of patients and is illustrated in figure 4.

Patient no. 1 shows a commonly seen hyperthyroid "curve," all 3 values being in the hyperthyroid range. In patients nos. 2 and 3, only at the 24-hour determination might one consider the uptake to be increased. Even at that time patient 3 shows a value no higher than borderline. In the case of patient no. 4, if only the 24-hour value, which was within normal limits, were obtained, the grossly abnormal uptakes seen at the earlier determinations would be missed completely. In all patients, then, exhibiting a "curve" similar to that in patient no. 4, obtaining only a 24-hour value would be inadequate, and, in fact, misleading. Incidentally, patient no. 4 required large and frequent therapeutic doses of radioactive iodine for the treatment of her hyperthyroidism. This probably was related to the failure of her thyroid gland to maintain significant levels of iodine.

The reasons for the marked variability which may occur in uptake "curves" of clinically similar individuals are not readily apparent. The uptake of iodine by the thyroid gland at a particular time depends on an intricate balance of many factors. These include the amount of thyroid tissue, its iodine content, its iodine-capturing ability, the quantity of available iodine in the blood, the organic binding of the iodine, the release of thyroid hormone by the gland, and many more less easily identifiable factors. However, this constitutes no greater mystery than that which shrouds other phases of the thyroid-metabolic cycle. It is well known that the radioactive iodine uptake value is a poor reflection of the level of metabolism in the peripheral tissues. It does not even necessarily

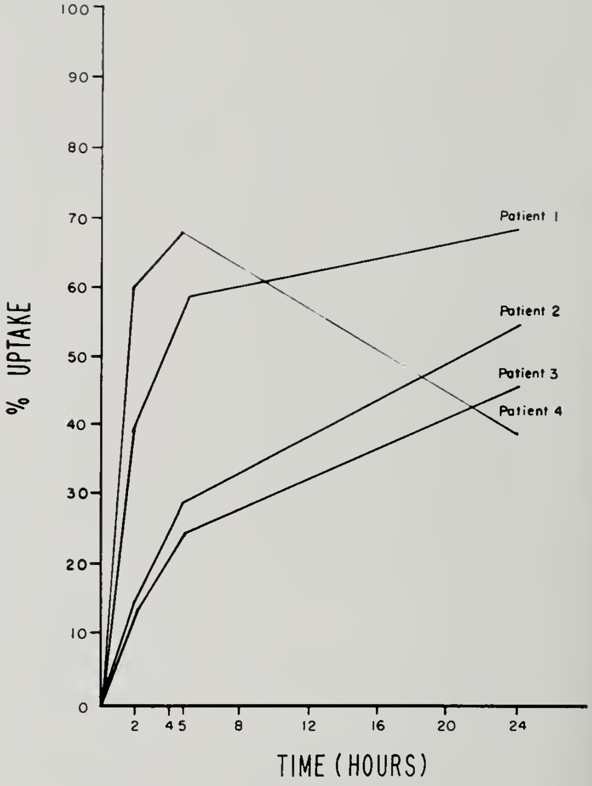

FIG. 4. Radioactive iodine uptake "curves" in hyperthyroid patients.

reflect the amount of thyroid hormone produced. For example, the euthyroid patients listed in table 2 all showed elevated iodine uptake values. The protein-bound iodine determinations, one measure of the level of circulating thyroid hormone, was elevated only in patient no. 5. This patient represented an interesting situation—a clinically normal level of metabolism with an increased rate of iodine uptake and an increased level of circulating thyroid hormone. One possible explanation for this situation is the production of a less metabolically-active form of hormone. Another consideration might be the existence of an imbalance between peripheral tissue supply and demand with respect to thyroid hormone. It may be that there are differing degrees of tissue receptivity to the hormone, causing differences in the metabolic effect of a given amount. This same type of mechanism might account for the occasional hypermetabolic patient with a normal protein-bound iodine determination. In any event, variation in the potency of thyroid hormone and/or variation in the tissue sensitivity probably are responsible for some of the dissociation seen between clinical and laboratory findings.

Summary and Conclusions

1. Results of fractional (2-, 5-, and 24-hour) determinations of radioactive iodine (I^{131}) uptake by the thyroid gland have been presented. The data have been analyzed and correlated with the clinical state of thyroid function. Normal ranges for these determinations at the Radioisotope Clinic, Walter Reed General Hospital, are considered to be:

Two hours: 5 to 20 per cent uptake
Five hours: 7 to 30 per cent uptake
Twenty-four hours: 15 to 50 per cent uptake.

2. The accuracy of the fractional uptake study varies in different conditions and in some cases at different time intervals; it probably never exceeds 85 per cent. Some of the paradoxical results of the uptake tests have been summarized and a discussion of possible mechanisms presented.

3. A depressant effect on the iodine uptake is noted in some euthyroid and hyperthyroid patients due to rather distant therapy for thyroid disease.

4. The uptake "curve" and some of its variations have been discussed.

5. The evaluation of the state of thyroid function is not difficult in the average case, a thorough clinical history and a careful physical examination often being sufficient. In the borderline case or the diagnostic problem, evaluation continues to be difficult in spite of the many new and sophisticated tests. The diagnostic support rendered by the radioactive iodine uptake study may be summarized as follows:

a. In suspected hypothyroid patients, determination at 24 hours is believed to be most helpful.

b. In suspected hyperthyroid patients, an uptake value greater than 23 per cent at 2 hours may suffice to support the diagnosis. The 5-hour determination is believed to be at least as accurate as that at 24 hours in separating hyperthyroid from euthyroid patients. In some cases the 2- or 5-hour determination is more helpful than the 24-hour test in substantiating the diagnosis of hyperthyroidism.

c. The thyroid suppression test may be extremely valuable in confirming the clinical impression of euthyroidism when the uptake is elevated.

Acknowledgment: We are indebted to Dr. Ross L. Gauld, Director, Division of Preventive Medicine, Walter Reed Army Institute of Research, for his important assistance in our statistical analysis of the data.

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(*Continued on page 644*)

Some Observations on the So-called Older Antibiotics and Their Clinical Application*

Part II. Bacitracin, Polymyxin B, Neomycin, the Tetracyclines, Chloramphenicol and Erythromycin

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BACITRACIN

Bacitracin is bactericidal and antagonistic to gram-positive organisms, including most strains of *Staphylococcus aureus.* Combined with other agents such as chloramphenicol, it has been used effectively against serious staphylococcal infections in which use of a single agent has not been so effective.[28] With the advent of dimethoxyphenyl penicillin sodium (staphcillin), vancomycin and other bactericidal antistaphylococcal agents, there is less need now for consideration of bacitracin alone or in combination in clinical infections.

Untoward effects following intramuscular administration of bacitracin include pain at the site of injection and nephrotoxicity reflected by albuminuria, glycosuria and rarely azotemia. Allergic reactions are caused infrequently by bacitracin.

If it is active against organisms resisting safer antibiotics, systemic use of bacitracin is justifiable. The recommended dose is 10,000 to 25,000 units given intramuscularly every 6 hours; careful studies of renal function are imperative. The drug is not well absorbed on oral administration and, administered thus, has been used as an intestinal antiseptic. It also has been given in amounts of 1,000 units by intrathecal and intraventricular injection. It has been used as an aerosol mist in pulmonary diseases.

Bacitracin is one of 5 antibiotics that are not well absorbed when given orally and are applicable to staphylococcal enterocolitis; the others are neomycin, ristocetin, vancomycin and kanamycin. The toxicity of these agents is largely circumvented by virtue of their relative unabsorbability by the oral route. In patients with staphylococcal enterocolitis who are unable to accept oral medication, administration of an agent via stomach tube is preferable to parenteral administration, which is less effective. Staphylococcal enterocolitis is a localized infection with constitutional manifestations and not a systemic infection. Therefore, in this syndrome it is not necessary to administer antibiotics designed to have systemic effect; since it is a local infection, the orally unabsorbed agents suffice if brought into contact with the invading organisms. Rarely there is ileus of such degree that even intubation seems incapable of delivering antimicrobials in sufficient quantity to the site of infection. In this case one gives antibiotics parenterally, but these agents do not cross the blood-intestinal barrier with ease, and providing sufficient concentration of them in the gut is difficult. There is no objection to giving orally absorbable agents to such patients aside from the fact that a systemic antibacterial effect is not mandatory. Since treatment often is necessary before susceptibility tests are reported, one may give the orally unabsorbed agents which are less frequently used systemically because of their toxicity and to which, consequently, staphylococci are more likely to remain sensitive. Resistance is comparatively higher to the orally absorbable agents, because they are less toxic and are used more frequently.

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* This article is being published in 2 parts, of which this is Part II. Part I appeared in the September issue of the MEDICAL ANNALS.

Polymyxin B

Nephrotoxicity, acroparesthesia, cerebellar ataxia, pain at the site of injection, fever, flushing, pruritus and generalized weakness may follow parenteral use of polymyxin B. Such disturbances may appear within 48 hours after the drug has been given, but they usually subside shortly after its administration has been discontinued.

Polymyxin B is reserved for infections not responding to other agents. It is active against coli-aerogenes, Shigella and Salmonella organisms but is used mainly in serious infections due to Pseudomonas organisms. Incidentally, the most common cause of Pseudomonas meningitis is said to be a diagnostic spinal tap; Pseudomonas organisms are referred to as "water bacilli," indicating their frequent presence in various fluids and on medical instruments exposed to fluids. This residence in solutions explains some iatrogenic urinary infections, in which the urologist inadvertently introduces Pseudomonas-laden fluids into the patient's bladder during cystoscopy and allied procedures. If instruments used in aspiration of the spinal fluid are exposed to solutions contaminated with Pseudomonas organisms, again iatrogenic infection may occur. This problem is also exemplified by patients who undergo cardiovascular operations with the so-called heart-lung machine that has been contaminated with Pseudomonas organisms and in whom Pseudomonas endocarditis or endarteritis subsequently develops. Pseudomonas endocarditis is incurable unless the surgeon can remove the cardiovascular nidus of infection, which exemplifies the so-called "paradox of Pseudomonas infection"; that is, the lowly water bacillus, rampant in nature and not infrequently relegated to secondary invasion in wounds and urinary infections, causes the only form of bacterial endocarditis uniformly not susceptible to antibiotic therapy.

Pseudomonas bacteremia has followed intravenous administration of contaminated fluids, including blood; bacteremia may follow local application of contaminated medications in ocular conditions and burns and has complicated "mist therapy" with tap water as a vehicle. Infection with this organism is abetted if the patient is receiving an agent, such as penicillin, to which the organism is resistant; the organism is thereby relieved of the tendency to natural eradication by its normal bacterial antagonists contained in the bodily flora. Also, in this regard, Pseudomonas and Proteus organisms are notable for their propensity to appear in sites of infection after the original invaders have been eliminated.

Pseudomonas bacteremia is one of "the angels of death" in victims of blood dyscrasias; therapy in Pseudomonas bacteremia not associated with serious hematologic disease is usually effective, but in Pseudomonas bacteremia complicating blood dyscrasias it is almost universally unavailing. The "hematologic paradox of Pseudomonas bacteremia" concerns the tendency of the infection to occur in patients whose bone marrow is replaced or is depressed by dyscrasias or by drugs used in treatment thereof, while Pseudomonas bacteremia not secondary to marrow disease produces per se leukothrombocytopenia. Pseudomonas bacteremia may be manifested by 3 other clinical findings which may enable one to distinguish it clinically from other gram-negative bacteremias; these are ulcerative axillary and perineal lesions known as "ecthyma gangrenosum," hepatic involvement manifested by jaundice, and, rarely, black-green fingernails and toenails.

Polymyxin B is administered intramuscularly in doses of 25 to 50 mg. every 6 to 8 hours. Some investigators have administered 25 to 35 mg. every 6 to 8 hours intravenously. Values for blood urea should be observed closely during administration. The agent has been administered intrathecally in doses of 1 mg. without apparent ill effect. In cases of Salmonella enteritis or shigellosis, a combination of polymyxin B and neomycin has been used orally; the intrinsic toxicity of these drugs is thereby avoided, since neither agent is absorbed well via this route.

In addition to polymyxin B, 6 antimicrobial agents are capable of nephrotoxicity: streptomycin, neomycin, bacitracin, amphotericin B, kanamycin and the sulfonamides. Whether vancomycin is nephrotoxic remains disputed.

A newer antibiotic, colistin sulfate (colymycin, colistimethate sodium),[29, 30, 31] while cross-resistant with polymyxin B and somewhat less bactericidal than that agent, may have a lesser number of side-effects. Although it may be slightly less efficient than polymyxin B, weight for weight, it appears that one can achieve effective blood concentrations of it. It appears not to be a polymyxin, although chemically it is similar. Colistin sulfate was isolated by Koyama in Japan in 1950 from *Aerobacillus colistinus*, an aerobic spore-forming bacillus related to *Aerobacillus polymyxa*. The antibiotic is a complex polypeptide which has been investigated by Japanese, French, Italian and, more recently, American workers. It is effective against several gram-negative bacilli but especially Pseudomonas and coli-aerogenes organisms. It is ineffective against Proteus organisms. A total daily dose of 100 to 150 mg. given intramuscularly in 2 to 4 divided doses is recommended for adults; in serious infections, up to 300 mg. daily may be considered. The intravenous route is not recommended.

Colistin sulfate may cause paresthesia, nausea, rash, fever, mild pain at the site of injection, perhaps transient leukopenia, and increased azotemia in patients with impaired renal function. Ototoxicity has not been reported. Vertigo occurred during administration of the drug in 1 patient.[29] Also, in 1 case a resistant strain of *E. coli* emerged during treatment.[29] Colistin sulfate appears, initially at least, to have several advantages when compared with polymyxin B and may have sufficient potential to partially displace polymyxin B in future clinical use.

NEOMYCIN

Neomycin is active against both staphylococci and coli-aerogenes organisms, but when given parenterally it is nephrotoxic. It may produce skin reactions and neurotoxic effects, including acroparesthesia and ototoxicity. It is not absorbed well from the gastrointestinal tract if one avoids giving more than 4 Gm. orally per day.[32, 33] It is used systemically only when safer agents will not suffice. A total daily dose of 1 Gm. administered in 4 separate intramuscular injections should not be exceeded. A dose of 2 mg. has been administered intrathecally without recognized ill effects.

Neomycin is one of 5 antibiotics capable of causing paresthesia, usually circumoral and of the acral parts; the others are streptomycin, polymyxin B, kanamycin and colistin sulfate.

Like the newer and similar agent, kanamycin, with which it is cross-resistant, neomycin is not absorbed well after oral administration and therefore has 3 oral uses of interest to the gastroenterologist: (1) in preoperative preparation of the bowel, (2) in intestinal antisepsis (for example, staphylococcal enterocolitis), and (3) in hepatic coma. Toxic effects may follow oral use of these agents, especially when the patient has renal or hepatic disease; it is well to recall that renal dysfunction may complicate both staphylococcal enterocolitis and hepatic coma.

In addition to neomycin, at least 3 other antibiotics are capable of damaging the eighth cranial nerve: streptomycin, kanamycin and vancomycin. Whether ristocetin can cause ototoxicity is not certain. One should avoid concurrent and perhaps sequential use of these ototoxic drugs.

The Tetracyclines

The term "tetracyclines" actually encompasses a group of drugs. Introduction of tetracycline hydrochloride largely supplanted the use of oxytetracycline (terramycin) and chlortetracycline (aureomycin), but the three agents probably can be considered interchangeable for clinical use. Compounding tetracycline with phosphate, citric acid or glucosamine is said to favor increased serum concentrations of the agent, but many of these data are contradictory. Further clinical use of the newest member of this group, demethylchlortetracycline, is not encouraged until its purported advantages and known disadvantages, such as photosensitization, are clarified. Roberts and co-workers[34] found that treatment with demethylchlortetracycline does not produce significantly higher serum levels than does treatment with tetracycline hydrochloride. Therefore, it does not seem reasonable to use this newer agent whose apparent advantage is now disputed and which carries the additional hazards of photosensitization and perhaps increased gastrointestinal irritation when administered in the higher dose recommended by Roberts and colleagues.

On oral use of the tetracyclines, nausea, vomiting, and looseness of the stools may ensue, but when frank diarrhea develops the stool should be examined by smear and culture for staphylococci. Staphylococcal enterocolitis following use of the tetracyclines, streptomycin, the sulfonamides and similar drugs that depress the gram-negative elements of the gastrointestinal flora is well known. While seen especially in surgical patients who have undergone preparation of the bowel with antibacterial agents, it is also seen in nonsurgical patients and in those who have not received antibacterials. Staphylococcal invasion of the bowel ordinarily is prevented by natural antagonists in the enteric flora, that is, the gram-negative bacilli, against which staphylococci cannot compete successfully. In their absence staphylococci grow wildly, release their toxin, and produce the characteristic syndrome. Some surgeons give bacitracin postoperatively to patients who have received antibacterials preoperatively to delay reappearance of gram-positive organisms, including staphylococci, in the bowel until the gram-negative bacilli have regained a foothold. Some investigators have considered administering coli-aerogenes organisms by mouth or via retention enema in patients predisposed to staphylococcal enterocolitis.

Theoretically, oral use of predisposing antibacterials is more likely to cause staphylococcal enterocolitis than parenteral use, since it is difficult to build up a high concentration of an agent in the bowel on parenteral administration. Also, the better an agent is absorbed from the bowel, the less it should remain therein to affect the flora, and hence the less the likelihood of staphylococcal superinfection; but again this is theoretic.

Among the antibacterials depressing the gram-negative flora and predisposing to staphylococcal enterocolitis are the sulfonamides, streptomycin, neomycin, kanamycin, the tetracyclines, chloramphenicol and polymyxin B. Paradoxically, all of these agents except polymyxin B affect certain gram-positive organisms and occasionally are used for this purpose. Conversely, penicillin, erythromycin, triacetyloleandomycin, novobiocin, ristocetin and vancomycin do not produce the syndrome, since they have little effect on the gram-negative flora.

It is dangerous to conclude that, in a patient suspected of having staphylococcal enterocolitis, absence of the syndrome is indicated by receipt of a bacteriologic report that smears and cultures of the stool are negative for staphylococci or that staphylococci are present together with the usual flora; patients with such negative or essentially negative reports have died of staphylococcal enterocolitis. In such cases, systemic manifestations appear more rapidly than local and identifying ones, and there may be no diarrhea, or the initial stool specimen may be nondiagnostic, since the process is cephalad and only later specimens will be diagnostic. If one encounters such a possible example of the syndrome that is not immediately verified by examination of the stool, smears and cultures of vomitus or of material aspirated from the upper part of the intestinal tract may be diagnostic. It is still not known whether staphylococcal enterocolitis and pseudomembranous enterocolitis are distinct syndromes; presently the distinction is bacteriologic; that is, if staphylococci are ultimately demonstrated, one is dealing with the former; if not, then pseudomembranous enterocolitis is, or was, the culprit.

The antibacterial factors predisposing to staphylococcal superinfection of the bowel may also encourage staphylococcal superinfection elsewhere in the body; the physician should not restrict his alertness to staphylococcal enterocolitis but should guard against staphylococcal pneumonia, bacteremia and the like. Staphylococcal enterocolitis is not the only cause of fever, hypotension, and disturbed consciousness in the postoperative patient; confusing states include (1) bacteremic shock, (2) hemorrhage into a serous cavity, (3) hepatic coma, and (4) an untoward reaction to drugs, including antibacterial agents, that is, drug fever and an associated anaphylactoid reaction.

Moniliasis as a significant complication of antimicrobial therapy, including treatment with tetracyclines, is very infrequent in our institution. We are unable to explain this discrepancy between our experiences and those cited by other investigators.

The incidence of nausea and vomiting after oral use of the tetracyclines is reduced if the drugs are given with cold, pasteurized milk. Use of milk, however, may be undesirable in patients who are following low-residue or low-sodium regimens, and of course some individuals cannot tolerate milk. In such circumstances we substitute calcium carbonate in amounts of 5 grains with each capsule of the antibiotic. Despite calcium's ability to decrease absorption of tetracycline, one achieves higher concentrations of the agent in the blood in this fashion than when resorting to the alternative of reducing the individual dose by 1 capsule (250 mg.) of the tetracycline. In this way the patient may accept 500 mg. or even 750 mg. of a tetracycline 4 times daily, rather than 250 mg. per dose or none at all.

As afore-mentioned, the tetracyclines in conjunction with streptomycin are used in serious infections due to gram-negative bacilli of enteric origin such as coli-aerogenes and Proteus organisms.[21] Also, as afore-mentioned, a similar regimen appears to be effective in managing brucellosis.[24-27] In situations in which a diagnosis of acute brucellosis is being considered, one should recall the 3 causes of false-positive brucellar agglutination: (1) acute tularemia, (2) previous use of brucellergin as a diagnostic (skin testing) and therapeutic agent, and (3) cholera immunization. In the treatment of acute brucellosis, 500 to 750 mg. of one of the tetracyclines is given orally every 6 hours and 1 Gm. of streptomycin is given intramuscularly twice daily for 2 weeks. Treatment of chronic, localized brucellosis is continued for 4 weeks, and only 1 Gm. of streptomycin is given daily, in addition to a tetracycline. Incidentally, chronic localized splenic brucellosis, a relatively new brucellar syndrome we have described in the past few years, is one of 3 infectious diseases characterized by splenomegaly and possible thrombocytopenia; the others are infectious mononucleosis and histoplasmosis. Also, chronic localized splenic brucellosis, histoplasmosis and tuberculosis are infectious causes of splenic calcification. It is well to remember that lack of brucellar agglutination or agglutination in low titer does not exclude a diagnosis of chronic localized brucellosis.

The tetracyclines are employed, usually as single agents, in actinomycosis,[19] rickettsial disease including the pararickettsial disease, psittacosis, and in the less common venereal diseases—lymphopathia venereum, granuloma inguinale (donovanosis) and chancroid. The tetracyclines are also used against some mild infections of the urinary tract, postoperative infections, and the like, when caused by susceptible gram-negative bacilli. Some data indicate significant resistance on the part of beta-hemolytic streptococci to the tetracyclines[35]; therefore, in patients unable to accept penicillin the tetracyclines may not be an acceptable substitute for management of infections due to these organisms, and specifically in so-called streptococcal sore throat due to such resistant bacteria the tetracyclines may not prevent complicating rheumatic fever or glomerulonephritis. Until more data are available regarding this interesting finding in patients with infections due to beta-hemolytic streptococci but who are unable to accept penicillin, one should administer an antibacterial agent other than one of the tetracyclines, such as erythromycin. Such resistance may explain the clinical impression of an increasing incidence of hemolytic streptococcal superinfection in patients receiving the tetracyclines.

The majority of strains of Bacteroides are sensitive to the tetracyclines. Members of our group[36] recently published data on some of our experiences in Bacteroides bacteremia. Three peculiarities of Bacteroides bacteremia are worth remembering:

1. In instances in which bacteremia seems likely but cultures of the blood give consistently negative results, one should alert the bacteriologist to the suspicion of possible infection due to Bacteroides and request him not to discard the anaerobic cultures, since in some cases of Bacteroides bacteremia it has required 3 weeks for the organism to grow out.

2. The ordinary rule regarding the duration of therapy in bacteremia, to the effect that therapy can be discontinued when the patient has been afebrile 72 hours and the results of 3 consecutive blood cultures have been reported as negative, does not apply to Bacteroides bacteremia, since if therapy is not continued at least 2 weeks the rate of relapse is high.

3. In Bacteroides bacteremia, tetracycline therapy alone may be as efficacious as combined streptomycin-tetracycline therapy.

Members of our group[37] undertook a further study to determine the concentration of erythromycin and tetracycline in ischemic tissues after oral administration of these agents. We have recently reported that, as was true of penicillin, oral administration of erythromycin or tetracycline also can be recommended for patients with ischemic limbs that are infected with organisms susceptible to one of these agents.

In indicated infections we administer orally 500 to 750 mg. of the tetracyclines at 6-hour intervals. In patients who cannot accept oral preparations because of dysphagia, vomiting, coma, suspected perforations of the intestinal tract and the like, we give 100 to 200 mg. of these agents intramuscularly every 6 to 8 hours, or 500 to 1,000 mg. intravenously every 6 to 12 hours. Chemical phlebitis at the site of intravenous injection occurs frequently, and the use of leg veins for the introduction of this and other antimicrobial agents is not advised. Tetracyclines given for prolonged periods may be hepatotoxic.

CHLORAMPHENICOL

Chloramphenicol is active against gram-positive and gram-negative organisms. It is the agent of choice in typhoid fever and is used in certain staphylococcal infections and rarely in infections due to gram-negative enteric bacilli that resist other agents. In Salmonella bacteremias other than typhoid fever, streptomycin-tetracycline therapy may be more effective than chloramphenicol therapy. In Salmonella enteritis, as afore-mentioned, neomycin-polymyxin B can be given by mouth, which largely circumvents the toxicity of these agents. Since use of chloramphenicol has coincided with depression of the bone marrow, it should not be administered indiscriminately. There are at least 3 other antimicrobial agents whose use may be associated with blood dyscrasias: ristocetin, sulfonamides and streptomycin; but streptomycin, since its use is relatively restricted, is rarely so associated today. Actually, all or nearly all of the antibacterial agents have been accused at one time or another of having ill effects on the marrow, but because victims of dyscrasias frequently receive multiple drugs, antibacterial and otherwise, definite conclusions about the remaining agents are drawn with difficulty.

The usual oral dose of chloramphenicol is 500 mg. given every 4 hours; the tetracyclines are administered every 6 hours. It is not unusual to give a higher initial dose of chloramphenicol, such as 1 Gm. Chloramphenicol acid succinate may be given in amounts of 250 to 500 mg. intramuscularly or 500 to 1,000 mg. intravenously every 6 to 12 hours.

In regard to gram-negative enteric bacilli, the degree of cross-resistance between chloramphenicol and the tetracyclines is not absolute. In certain severe infections due to such organisms not responding to tetracycline-streptomycin therapy it is wise to procure susceptibility tests with chloramphenicol and kanamycin with a view to substituting 1 or both agents. In such situations, if staphylococci are also present or if staphylococcal superinfection is likely, use of either chloramphenicol or kanamycin or both may avert further difficulties in this regard. A regimen of chloramphenicol-kanamycin is not used routinely in serious gram-negative infections, because it has greater potential toxicity than does tetracycline-streptomycin. The restricted use of chloramphenicol makes it employable in these situations; indiscriminate use of the agent may not only increase the incidence of blood dyscrasias but also may increase the number of bacterial strains capable of resisting its action. Rarely, polymyxin B, another toxic agent, is used in bacteremia due to coli-aerogenes organisms not responding to streptomycin-tetracycline therapy. Since "bacteremic shock" and renal shutdown may complicate gram-negative bacteremia, one must exercise caution in the use of nephrotoxic agents such as streptomycin, kanamycin and polymyxin B in such states; as afore-mentioned, delayed renal excretion of these drugs also allows their accumulation in the blood stream and hence furthers their neurotoxic effects.

ERYTHROMYCIN

Erythromycin has been used chiefly as an antistaphylococcal agent, but approximately a fourth of the staphylococci currently encountered in many hospitals resist erythromycin, a fact that has lessened its applicability. Triacetyloleandomycin, the chemically altered oleandomycin, which is effective against approximately 70 per cent of erythromycin-resistant staphylococci, and novobiocin, which has no cross-resistance with either erythromycin or triacetyloleandomycin, are about as effective against staphylococci as is erythromycin. These agents are mentioned because occasionally they are referred to as erythromycinlike agents.

Erythromycin is of use in patients who are allergic to penicillin and who have nonendocardial infections susceptible to erythromycin. Erythromycin has some effect against Haemophilus bacilli, and occasionally one can avoid use of more toxic agents by the use of erythromycin in infections, such as pharyngitis, due to these organisms. I have already mentioned the fact that erythromycin, like tetracycline and penicillin, attains detectable concentrations in ischemic tissues after oral administration.

The propionyl erythromycin ester (Ilosone) may provide higher and more persistent concentrations in serum than does erythromycin base but has been associated with a hepatotoxic effect and jaundice One hundred and twenty-five to 250 mg. of the newer agent has been recommended for oral administration at 6-hour intervals; twice the amount of erythromycin base is given. Mild gastrointestinal irritation may follow oral use of the agent, but there is little evidence of serious allergic reactions. Preparations of erythromycin are available for parenteral administration.

Conclusion

It is evident that replacement of so-called older antibacterial agents by ones more recently available is not necessarily correct. The older antibacterial agents continue to have proper clinical application, and one should not hasten to dislodge them solely on the basis of novelty. One should be highly grateful for the availability of the older antibacterial agents, perhaps better called the established agents, yet be ever ready to investigate newer ones that appear to possess the potential of replacement.

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MANAGEMENT OF INTRACTABLE PAIN IN METASTATIC CANCER

Edited by

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A 56-year-old white woman was admitted to the Georgetown University Hospital with the complaint of excruciating pain low in the back and the left buttock and leg. The illness leading to the hospitalization began 10 years previously when a mass was noted in the left breast. The patient did not seek medical attention for 2 years, when a diagnosis of carcinoma of the left breast with metastases to the left axilla was made by aspiration biopsy. Due to the great size and fixation of the left axillary involvement the patient was considered inoperable, and a course of X-ray therapy was begun. During the next 2 years the patient received several series of X-ray treatments to the left breast and axilla. Bilateral oöphorectomy was performed. Three years prior to admission the breast lesion became ulcerated and a simple mastectomy was required. One year ago pain developed low in the back and X-ray films revealed evidence of metastatic disease in the lumbar spine. A course of X-ray therapy was begun to this area with good relief of the patient's pain. Seven months prior to admission, however, left hip pain developed and increased progressively. The patient by this time had reached the limit of X-ray tolerance. A series of medications to control her pain was begun, but eventually the point was reached where no relief was achieved with large doses of both Demerol and Phenergan. Courses of testosterone and stilbestrol were attempted, but both these hormones increased the severity of the pain. It became impossible for the patient to walk, and she was admitted for consideration of a neurosurgical procedure.

This obese woman was in distress. A well-healed mastectomy scar without evidence of local recurrence and a palpable left axillary lymph node were present.

After the patient's diagnostic workup was completed, an anterolateral cordotomy at the level of T-2 was performed on the right side. There was immediate relief of her left-sided pain, but within 24 hours she began to experience pain in her right hip and pelvis for the first time. The severity of this new pain gradually increased, and 9 days later an anterolateral cordotomy at the level of T-3 was performed on the left side. Thereafter total relief from all pain below the umbilicus was achieved. The only complaint was that of mild incisional pain in the upper thoracic area which soon subsided completely.

Dr. William F. R. van de Graaff*: This patient has had many X-ray examinations during the course of her decade of observation and treatment. In 18 months prior to her present admission left-sided pulmonary metastases were noted for the first time. We see here small round densities without calcification which were considered suspicious of pulmonary involvement. On a subsequent examination these densities have increased both in number and in size and were considered diagnostic of metastatic disease. X-ray films of the spine a year ago revealed osteolytic lesions with destruction of the pedicles of L4 and irregularities of the pedicles of L5. Films taken on this admission reveal an osteoplastic process in the body of L4 and L5. In addition, other films demonstrate metastases in the sacrum. Lytic lesions were also noted in the ribs.

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* Instructor in Radiology

Dr. E. B. Chung*: The first specimen received from this patient in our laboratory dates 8 years back, at which time an aspiration biopsy of the breast tumor was performed. Smears revealed malignant cells arranged in a glandular pattern; our diagnosis was adenocarcinoma. Four years ago bilateral oöphorectomy was performed. The ovaries showed no evidence of metastases. A year later, because of ulceration of the tumor, a simple mastectomy was done. Sections of the breast (figure 1) revealed an intraductal carcinoma. The neoplastic cells are filling the ducts, arranged in a cribriform pattern with central areas of necrosis and occasional calcification. The basement membrane seems to be intact in most of the ducts; however, there are focal areas in which this membrane appears to be broken and the neoplastic cells spill into the surrounding stroma which shows mild desmoplasia. Consequently, this tumor was diagnosed comedocarcinoma of the breast with early invasion of the surrounding stroma. One lymph node and the skeletal muscle received with the specimen show no evidence of metastasis. The following year biopsy was made of a tumor mass from the site of the previous mastectomy. At this time sections showed skeletal muscle and fatty tissue, infiltrated and partially replaced by sheets and cords of anaplastic, pleomorphic, hyperchromatic tumor cells. Our diagnosis, this time, was metastatic anaplastic carcinoma invading pectoral muscle and fat.

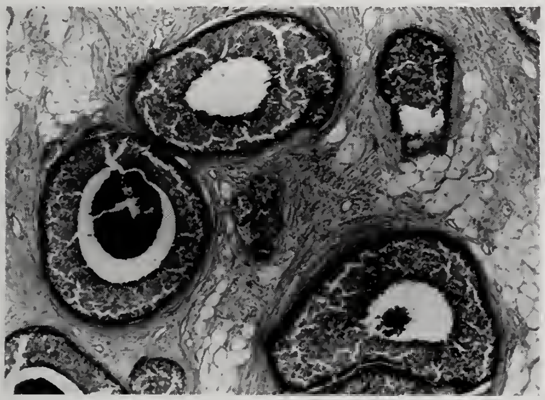

FIG. 1. Intraductal carcinoma with neoplastic cells plugging the lumina of the ducts. This is the so-called comedocarcinoma.

In summary, this patient has evidence of widespread metastatic disease from her carcinoma of the breast.

Dr. Elbert T. Phelps†: We are discussing today the difficult problems encountered in the management of patients with late widespread metastatic carcinoma. I think that the guiding principle of management in these cases must be the adoption of the correct frame of mind by the physician. He should not consciously or subconsciously adopt a defeatist attitude because the patient has an incurable extension of disease. He should rather attack the problem of looking on the optimistic side and realize that many patients are capable of being maintained for long periods of time in quite satisfactory clinical condition. An optimistic and aggressive attitude in the management of the patient who is incurable but not untreatable will benefit the patient psychologically. Reassurance, understanding, and encouragement are valuable therapeutic agents in total patient care.

More specifically, let us consider first the use of analgesic drugs for the relief of pain. In my opinion, if any error is made in this regard it lies in overprescribing for these patients. This is especially true in the early stages of incurable cancer. It must be remembered that these patients may have a protracted course, and the analgesic therapy should be planned with a long period of survival in mind. Even more important, it must be remembered that a sufficient analgesic effect in many cases can be accomplished with salicylates, at least in the initial stages, and that the use of a stronger drug is not only unnecessary but quite undesirable. If this agent is unsatisfactory, codeine may be added to the régime. Increasing analgesic potency is offered by Demerol in small oral doses with progression to larger doses and then to hypodermic administration. If this drug becomes ineffective the physician can switch to morphine in the lower dosage ranges of 10 to 15 mg. every 3 or 4 hours. The dose may then be increased as required.

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* Instructor in Pathology

† Assistant Professor of Medicine

In our opinion the analgesic effect of a narcotic can be potentiated quite well by using small doses of barbiturates. Thirty to 60 mg. of phenobarbital every 3 or 4 hours has been shown to be an excellent agent for the relief of the anxiety that accompanies this diseased state. Less narcotic is needed when sedatives are used in this fashion. The use of Thorazine, Equanil or similar drugs may be employed, although in my experience these agents have not apparently had greater therapeutic effect than barbiturates in potentiating analgesic action. We should always keep in mind that one of the main problems in the management of the far-advanced cancer patient is drug addiction. This accounts for a considerable portion of the patient's anxiety and distress.

There are, of course, many other features of clinical management which make the patient's terminal course more comfortable. These include the use of vigorous nursing care to prevent bed sores, careful attention to bowel function, and the use of an indwelling catheter if necessary to prevent urinary incontinence.

Mention must also be made of the palliative effects of ovariectomy, adrenalectomy, and hypophysectomy. It is apparent that perhaps 40 per cent of patients achieve relief of pain with these procedures. Estrogen and androgen therapy may occasionally give good palliative results. Some of the newer hormonal agents have the advantage of lesser virilizing action than testosterone propionate.

DR. ALFRED LUESSENHOP*: This patient had pain in the left hip and buttock which was of such severe intensity she was no longer able to walk. The pain was refractory to heavy doses of narcotics potentiated with Phenergan. Because the pain was restricted to the left buttock and the left hip a unilateral right cordotomy was performed. Shortly after this operation she noticed for the first time pain in the right leg. Transferral of pain to an area previously uninvolved is seen in almost 50 per cent of the cases of unilateral cordotomy for malignant disease. An explanation for this phenomenon may be that pain has been present on the opposite side but that the patient becomes aware of it only after the more severe pain on the other side has been eliminated. After this patient's second cordotomy the transferred pain disappeared. At present she is ambulatory and her catheter is out.

On examination today there is a level of analgesia and thermanesthesia up to the level of the umbilicus on the left side. Firm compression of the Achilles tendon, successive pin pricks, and forceful hyperextension of the big toe fail to provoke any unpleasant sensation. Position sense, appreciation of light and deep pressure are normally intact, and except for thermanesthesia she is not aware of the loss of any useful sensory modality. On the right side, however, the level of analgesia has dropped lower than the midabdomen. There is some appreciation of pain along the lateral thigh and calf. Despite this she has no spontaneous pain. The weakness of her legs is consistent with disuse, and the deep tendon reflexes are still sluggish, which suggests no significant pyramidal tract damage. It is anticipated that she will walk normally.

Generally, a patient may be a candidate for pain surgery if the life expectancy is greater than 2 months and analgesic agents stronger than codeine are necessary. Surgical technics to alleviate pain are many. Division of peripheral nerves, except in head and neck cancer, over the years has been a disappointing procedure and is not commonly used. Frontal leukotomy has produced personality changes too drastic to permit its consideration as the primary procedure to alleviate pain except in cases of hopeless addiction or diffuse extreme pain. A form of fractional leukotomy in which it is possible to titrate the personality change against pain relief may become useful in the future, but at present leukotomy is not justified if any less radical procedure has a chance for success. Stereotactic destruction of the thalamic end-stations of the pain tracts is still highly experimental.

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* Instructor in Neurosurgery

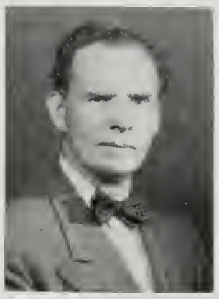
At present, cordotomy, or division of pain fibers in the cord, is the procedure of choice. The nerve fibers conducting pain cross to the opposite side within a few segments after entering the spinal cord. Ascending to the thalamus, the pain tracts are accessible to section in the cord, medulla and mesencephalon. At no point, however, is the tract as discrete as many textbooks suggest, and the section must be wide to produce adequate analgesia below. In the cord it is necessary to section virtually the entire anterior quadrant. In a carefully studied report of 241 cases of unilateral cordotomy complete relief of pain was achieved in 81 per cent, and an additional 10 per cent derived sufficient relief to discontinue narcotics. Therefore, satisfactory results were found in 91 per cent. In longer follow-up these successes declined to about 80 per cent, mostly due to failure of the level of analgesia to remain sufficiently high.

As regards complications, with unilateral cordotomy, only 2 to 3 per cent permanently require a catheter, although most will have some transient bladder atony. Constipation is only rarely a problem. Weakness of the contralateral extremities, although frequent in the immediate postoperative period, rarely prevents normal ambulation. With a bilateral cordotomy in stages, as with the patient presented today, these complications are slightly greater. A bilateral cordotomy in 1 stage increases the permanent bladder complications to almost 30 per cent. The operative mortality will depend, of course, upon the status of the patient selected. Generally, in the cancer group this should not exceed 5 per cent.

In summary, physicians must remember that many cases of severe intractable pain may be amenable to surgery with an excellent chance for success. There is scarcely a more trying situation for the patient, his family, and his physicians than the combination of severe pain coupled with drug addiction. Cordotomy may overcome this formidable clinical problem.

PRESIDENT'S PAGE

THE DUTY OF ASSEMBLY



Among the rights cherished by free men is that of assembly. Today as much as ever before we are confronted with evidence that rights must be exercised if they are to be retained, thus in a real sense they become duties.

For professional groups especially it is important that planned and thoughtful assembly among peers be attained with proper frequency. Paradoxically, the enormous advances in communication are making personal assembly even more needful because in no other way can appreciation be so well obtained of the significance of scientific publication.

Shocking indeed are the statistics. Two million papers of about 5,000 words each in 50,000 journals besides 60,000 books are added each year to the world literature of science, or more than 1,000 words every second of the working day.

Since there is no authentic system for adequate discrimination in the face of such vast literature, it becomes necessary for scientists, including physicians, to engage in periodic dialogue with colleagues. The 29th Annual Scientific Assembly of the Medical Society of the District of Columbia, to be held during the last week in November, is such an occasion of duty for the physicians of this area. I am proud to be associated with the framers of the splendid program described in this issue of the Annals. I am fully confident that any physician who attends cannot fail to be enriched thereby.

Furthermore, this meeting, at the same time as the AMA Clinical Session in Denver, is bound to be prominently before the public in this Capital City as illustrative of the serious doings of doctors. This is the formal call to all our members and their colleagues in other societies to join in this Assembly and to make it one of which we can be justly proud, because it will have shown us in our best light as dedicated students seeking better ways to serve.

Donald Stubbs

NEW FRONTIERS IN MEDICINE

29TH ANNUAL SCIENTIFIC ASSEMBLY

STATLER HILTON HOTEL, WASHINGTON, D. C.

NOVEMBER 27 - 28 - 29, 1961

What the Assembly Offers You

Dr. Alpert

Although "New Frontiers" has a political connotation, its use in connection with the program for the 29th ANNUAL SCIENTIFIC ASSEMBLY is most appropriate, because the latest advances in medicine in the form of lectures, panel discussions, seminars, exhibits and motion pictures will be brought to those who attend.

As always, the primary purpose of the ASSEMBLY is to impart scientific information, but other subjects of a general nature will be discussed at the luncheons given by the Medical Society on Monday, the George Washington Medical Alumni Association on Tuesday, and the Georgetown University Medical Alumni on Wednesday.

An opportunity for relaxation will be afforded those who attend the Annual Dinner Dance on Wednesday. Good fellowship, fraternalism, and renewal of acquaintances are the Medical Society's objectives in sponsoring this social event.

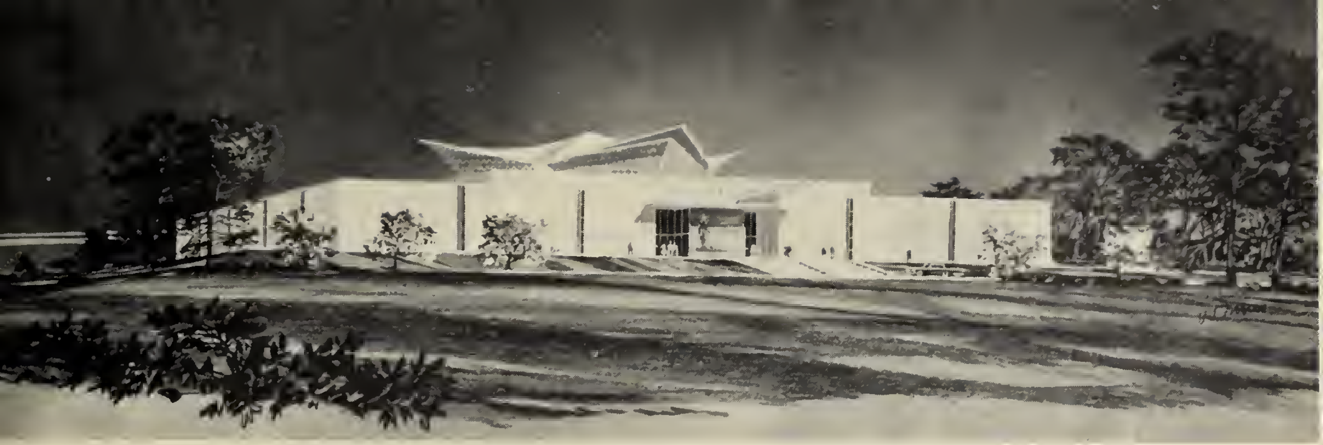
An innovation this year will be the Hobby Show featuring interesting leisure activities pursued by Washington physicians.

The Chairmen and members of the various committees responsible for the ASSEMBLY, the Secretary and the Assistant Secretary of the Society have been most coöperative and helpful.

I sincerely hope the scientific and social programs will be enjoyed by all members and guests.

Seymour Alpert

GENERAL CHAIRMAN
COMMITTEE ON ARRANGEMENTS



New Building Design for National Library of Medicine

29th ANNUAL SCIENTIFIC ASSEMBLY

NEW FRONTIERS IN MEDICINE

SCIENTIFIC PROGRAM*

GENERAL SESSIONS

PRESIDENTIAL BALLROOM

MONDAY MORNING, NOVEMBER 27

Donald Stubbs, M.D. *Presiding*

President, The Medical Society of the District of Columbia

CHOLESTEROL AND ITS METABOLISM

9:45 CHOLESTEROL AND THE DIET

Ancel Keys, Ph.D.

Director of Physiological Hygiene, University of Minnesota

10:00 CHOLESTEROL AND THE TEST TUBE

William Hollander, M.D.

Assistant Professor of Medicine, Boston University

10:15 CHOLESTEROL AND THE GENES

Donald S. Fredrickson, M.D.

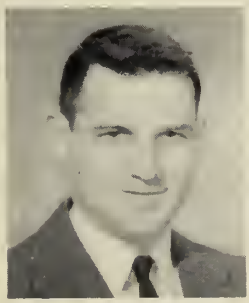
Clinical Director, National Heart Institute, National Institutes of Health

10:30 CHOLESTEROL AND THE BODY

Arthur Grollman, M.D.

Professor of Experimental Medicine, Southwestern Medical School, University of Texas

Dr. Keys



Dr. Hollander

Dr. Fredrickson

Dr. Grollman

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* The Medical Society is deeply indebted to the American Cancer Society and the Washington Heart Association for financial assistance given the ASSEMBLY's Program Committee.

INTERMISSION

11:05 Panel Discussion: CAN DIET AND/OR DRUGS PREVENT ATHEROSCLEROSIS?

MODERATOR:

Thomas W. Mattingly, M.D.
Director of Medical Education, Washington Hospital Center

PANELISTS:

Ancel Keys, Ph.D.
William Hollander, M.D.
Donald S. Fredrickson, M.D.
Arthur Grollman, M D

MONDAY AFTERNOON, NOVEMBER 27

PRESIDENTIAL BALLROOM

Clarence K. Fraser, M.D. *Presiding*
First Vice President, The Medical Society of the District of Columbia

Dr. Kurlander

Dr. Feinstein

Dr. Bialy

Mr. England

2:15 THE STATUS OF ORAL POLIO VACCINE
Arnold B. Kurlander, M.D.
Assistant Surgeon General, United States Public Health Service

2:35 THE 900-CALORIE DIET
A. R. Feinstein, M.D.
Medical Director, Irvington House, Irvington-on-Hudson, N. Y.

2:55 THE PHARMACOLOGY OF PROGESTERONE
Gabriel Bialy, Ph.D.
Worcester Foundation for Experimental Biology, Shrewsbury, Mass.

INTERMISSION

3:40 Panel Discussion: TO DRIVE OR NOT TO DRIVE—THE PHYSICIAN'S RESPONSIBILITY

MODERATOR:

Herbert S. Gates, M.D.
Chairman, Traffic Committee, The Medical Society of the District of Columbia

PANELISTS:

Mr. George A. England
Director, Department of Motor Vehicles, District of Columbia Government

Winfred Overholser, M.D.
Superintendent, St. Elizabeths Hospital, Washington

Felix Heald, M.D.
Director, Adolescent Medicine, Children's Hospital, Washington

Henry D. Ecker, M.D.
Assistant Clinical Professor of Medicine, George Washington University School of Medicine

TUESDAY MORNING, NOVEMBER 28

PRESIDENTIAL BALLROOM

Josephine Renshaw, M.D., *Presiding*

Second Vice President, The Medical Society of the District of Columbia

TRANQUILIZERS AND ANTIDEPRESSANTS

9:45 HOW THEY WORK

Nathan S. Kline, M.D.

Director of Research, Rockland State Hospital, Orangeburg, New York

10:05 UNDERSTANDING AND MANAGEMENT OF COMPLICATIONS IN THE TREATMENT WITH PSYCHOTROPIC DRUGS

Fritz A. Freyhan, M.D.

Director of Clinical Studies, Clinical Neuropharmacology Research Center, St. Elizabeths Hospital, Washington

10:25 MEDICO-LEGAL ASPECTS

Murdock Head, M.D.

Chairman, Institute of Forensic Medicine, George Washington University

INTERMISSION

11:00 Panel Discussion: INDICATIONS AND CONTRAINDICATIONS TO THE USE OF TRANQUILIZERS AND ANTIDEPRESSANTS

MODERATOR:

Zigmond M. Lebensohn, M.D.

Clinical Professor of Psychiatry, Georgetown University School of Medicine; Chief of Psychiatry, Sibley Memorial Hospital

PANELISTS:

Roland B. Scott, M.D.

Chief Pediatrician, Freedmen's Hospital; Head, Department of Pediatrics, Howard University College of Medicine

Alec Horwitz, M.D.

Clinical Professor of Surgery, George Washington University School of Medicine

Nathan S. Kline, M.D.

Fritz A. Freyhan, M.D.

Murdock Head, M.D.

TUESDAY AFTERNOON, NOVEMBER 28

PRESIDENTIAL BALLROOM

James W. Watts, M.D., *Presiding*

Chairman, Executive Board, The Medical Society of the District of Columbia

CARDIAC CATASTROPHIES

2:15 CARDIAC ARREST—EXTERNAL RESUSCITATION

James R. Jude, M.D.

Instructor in Surgery, Johns Hopkins University School of Medicine and Hospital

2:35 CIRCULATORY OVERLOAD

S. N. Albert, M.D.

Director of Research Anesthesia Laboratory, Washington Hospital Center

2:55 ACUTE HEART FAILURE IN CHILDREN

Bernard J. Walsh, M.D.

Cardiologist, Children's Hospital, Washington

INTERMISSION

3:40 AN APPRAISAL OF FIBRINOLYTIC AGENTS IN THE TREATMENT OF THROMBO-EMBOLIC DISEASE

Kenneth M. Moser, M.D.

Dr. Jude

Dr. Kline

Instructor in Medicine, Georgetown University School of Medicine; Enzyme Research Laboratory, District of Columbia General Hospital

4:10 Basic Indication for Bladder Neck Revision on Children

Victor F. Marshall, M.D.

Attending-in-charge in Urology, James Buchanan Brady Foundation of New York Hospital, Cornell Medical Center

WEDNESDAY MORNING, NOVEMBER 29

Presidential Ballroom

Seymour Alpert, M.D., *Presiding*

General Chairman, Committee on Arrangements, 29th Annual Scientific Assembly

THE PHYSICIAN'S ROLE DURING THE FIRST 30 MINUTES

9:45 The Causes of Death Following Trauma

William T. Fitts, Jr., M.D.

Professor of Surgery, University of Pennsylvania School of Medicine

10:05 Burns

Captain Joseph R. Connelly, MC, USN

Chief of Plastic Surgery, Naval Hospital, U. S. National Naval Medical Center

10:15 Poisons

Allan B. Coleman, M.D.

Assistant Clinical Professor of Pediatrics, George Washington University School of Medicine

10:25 The Unconscious Person

Hugo V. Rizzoli, M.D.

Assistant Professor of Neurosurgery, George Washington University School of Medicine

10:35 Accidents

J. Blaine Harrell, M.D.

Assistant Clinical Professor of Surgery, George Washington University School of Medicine

Intermission

11:00 Panel Discussion: WHAT IS INVOLVED WHEN YOU ASSUME RESPONSIBILITY FOR EMERGENCY MEDICAL CARE?

Moderator:

William T. Fitts, Jr., M.D.

Panelists:

H. Mason Welch, Esq.

Welch, Daily & Welch, Washington

Arthur J. Hilland, Esq.

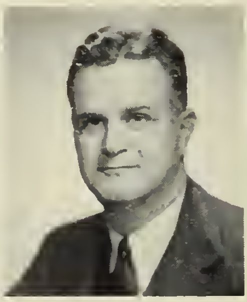
Hilland, Mack & Hogan, Washington

Captain Joseph R. Connelly, MC USN

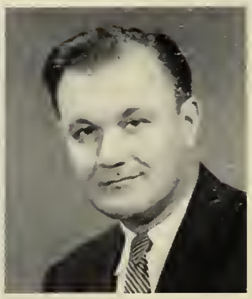
Allan B. Coleman, M.D.

Hugo V. Rizzoli, M.D.

J. Blaine Harrell, M.D.



Dr. Marshall



Dr. Fitts

Captain Connelly

WEDNESDAY AFTERNOON, NOVEMBER 29

PRESIDENTIAL BALLROOM

Donald Stubbs, M.D., *Presiding*

President, The Medical Society of the District of Columbia

MAGIC MEDICINE FOR MALIGNANCY?

2:15 FOR LEUKEMIA AND LYMPHOMAS

Jess Gamble, M.D.

The University of Texas M.D. Anderson Hospital and Tumor Institute, Houston

2:35 FOR SOLID TUMORS

Anthony R. Curerri, M.D.

Professor of Surgery and Director, Cancer Research Hospital, University of Wisconsin

2:55 FOR ENDOCRINE DEPENDENT TUMORS

John B. Weeth, M.D.

Division of Endocrinology, Alton Ochsner Medical Foundation, New Orleans

INTERMISSION

3:40 Panel Discussion: HAZARDS AND COMPLICATIONS OF CANCER CHEMOTHERAPY

MODERATOR:

Frank N. Miller, Jr., M.D.

Associate Professor of Pathology, George Washington University School of Medicine

Dr. Gamble

Dr. Weeth

PANELISTS:

Louis Alpert, M.D.

Professor of Medicine, George Washington University School of Medicine

Jess Gamble, M.D.

Anthony R. Curerri, M.D.

John B. Weeth, M.D.

SPECIALTY MEETINGS

TUESDAY MORNING, NOVEMBER 28

SYMPOSIUM FOR RADIOLOGISTS

PAN AMERICAN ROOM

John F. Hashim, M.D., *Presiding*

Chairman, Section on Radiology, The Medical Society of the District of Columbia

10:00 FILM-READING SESSION

MODERATOR:

Forrest V. Schumacher, M.D.

Attending Radiologist, Washington Hospital Center

READERS:

Alvin C. Wyman, M.D.

Chief, Department of Radiology, Alexandria (Virginia) Hospital

Charles E. Bickham, Jr., M.D.

Associate Radiologist, Doctors Hospital, Washington

William E. Sheely, M.D.

Radiologist, Washington

John W. Lawlah, M.D.

Clinical Professor of Roentgenology, Howard University College of Medicine

TUESDAY AFTERNOON, NOVEMBER 28

SYMPOSIUM FOR SURGEONS

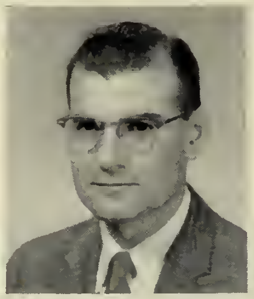
PAN AMERICAN ROOM

Garnet W. Ault, M.D., *Presiding*

President, Washington Academy of Surgery

Dr. Congdon

Dr. Hume



Dr. Webb

TRANSPLANTATION

2:15 MODIFICATION OF TRANSPLANT IMMUNITY

Charles C. Congdon, M.D.

Biology Division, Oak Ridge National Laboratory, Oak Ridge, Tenn.

2:45 KIDNEY TRANSPLANTATION

David M. Hume, M.D.

Professor of Surgery and Chairman, Department of Surgery, Medical College of Virginia, Richmond

INTERMISSION

3:30 HEART TRANSPLANTATION

Watts R. Webb, M.D.

Associate Professor of Surgery, University of Mississippi Medical Center

4:00 THE TISSUE BANK

George W. Hyatt, M.D.

Professor of Orthopedic Surgery, Georgetown University School of Medicine

4:30 ROUND TABLE

MODERATOR:

Garnet W. Ault, M.D.

PANELISTS:

Charles C. Congdon, M.D.

David M. Hume, M.D.

Watts R. Webb, M.D.

George W. Hyatt, M.D.

WEDNESDAY MORNING, NOVEMBER 29

SYMPOSIUM FOR INTERNISTS

Pan American Room

Paul R. Wilner, M.D., *Presiding*

Chairman, Board of Credentials, The Medical Society of the District of Columbia

CHRONIC DISORDERS RELATED TO THE LUNGS

10:00 Pulmonary Function Tests in Diagnosis

Harold M. Silver, M.D.

Director of Pulmonary Laboratory and Assistant Clinical Professor of Medicine, George Washington University School of Medicine

10:20 Bronchospastic Disease—Its Detection and Management

Ben V. Branscomb, M.D.

Associate Professor of Medicine, Medical College of Alabama

Intermission

11:05 Chronic Cor Pulmonale

Alfred P. Fishman, M.D.

Director, Cardio-Respiratory Laboratory, The Presbyterian Hospital, New York City

11:35 Round Table

Moderator:

Sol Katz, M.D.

Chief, Medical Service, Mt. Alto Veterans Administration Hospital

Panelists:

Harold M. Silver, M.D.

Ben V. Branscomb, M.D.

Alfred P. Fishman, M.D.

WEDNESDAY AFTERNOON, NOVEMBER 29

ANESTHESIOLOGY SECTION MEETING

Pan American Room

Seymour Alpert, M.D., *Presiding*

General Chairman, Committee on Arrangements, 29th Annual Scientific Assembly

Moderator: **William E. Bageant, M.D.**, Vice Chairman, Department of Anesthesia and Director of Resident Training Program, Washington Hospital Center

2:15 Hypothermia as a Treatment of Arrested Circulation: Case Report

Philip J. Lowenthal, M.D.

Senior Attending in Anesthesiology, Washington Hospital Center

2:35 General Discussion Period

2:40 Monitoring Devices versus Clinical Observations

Douglas W. Eastwood, M.D.

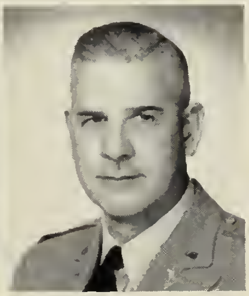
Clinical Professor of Anesthesiology, University of Virginia Medical School, Charlottesville

3:00 General Discussion Period

3:05 Intermission

Dr. Branscomb

Dr. Eastwood



Colonel Slocum

3:30 Hyperventilation Technics of Anesthesia for Neurosurgery

Colonel Harvey C. Slocum, MC, USA
Chief, Anesthesia and Operative Service, Walter Reed General Hospital, Walter Reed Army Medical Center

3:50 General Discussion Period

3:55 Management of the Poor Risk Cardiac Patient

Charles S. Coakley, M.D.
Professor of Anesthesiology, George Washington University School of Medicine

4:20 General Discussion Period

4:25 Anesthesia for Incidental Surgery during Pregnancy

Thomas F. McDermott, M.D.
Professor of Anesthesiology, Georgetown University School of Medicine

Beatriz DeNava, M.D.
Research Fellow in Anesthesia, Georgetown University School of Medicine

4:45 General Discussion Period

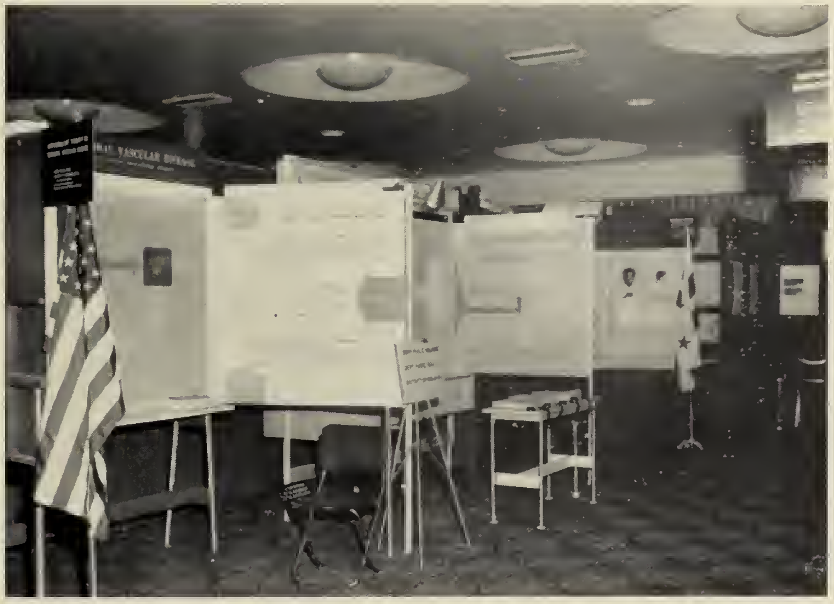
The Scientific Exhibit

The Scientific Exhibit will be on display in the South American Room, the Californian Room, the Ohio Room, and Foyer 3 of the Statler-Hilton Hotel. Below is a list of the exhibits and the sponsors:

Titles	*Exhibitors*
A New Corticosteroid in Dermatologic Disorders	James Q. Gant, Jr., M.D., Arnold H. Gould, M.D., and Marc Allen Weiner, M.D.
Behind the Scenes of Bio-astronautical Research	Harald Von Beckh, M.D., Aeromedical Field Laboratory, Holloman Air Force Base, N. M.
Clinical Evaluation of a New Central Acting Hypotensive	John W. DuChez, M.D.
Conservation of the Diabetic Foot	James M. Moss, M.D., Jerome Shapiro, Pod.D., DeWitt E. DeLawter, M.D., and Donald Lyons, Pod.D., Georgetown University Hospital
Cranioplasty in Neurosurgery	William T. Spence, M.D.
Demonstration of Calcified Coronary Arteries in Humans Using Image Amplification Fluoroscopy	Charles E. Bickham, Jr., M.D. and Carolyn Edwards, M.D.
Double-blind Application of a New Agent in Musculoskeletal Disorders	C. David Cooper, M.D.
Examination of the Colon and Rectum	American Cancer Society
Fresh Tissue Exhibit	Section on Pathology and Laboratory Medicine, The Medical Society of the District of Columbia
Frontiers in Cardiovascular Surgery	Charles A. Hufnagel, M.D. John F. Gillespie, M.D., and Peter Conrad, M.D., Georgetown University Hospital

Introduction to Colposcopy	George Szele, M.D.
Malmström's Vacuum Extractor—A Versatile Instrument	Jean E. Paquin, M.D. and Juan G. Machado, M.D., Department of Obstetrics and Gynecology, Providence Hospital
Medical Aspects of the Civil War	National Library of Medicine
Nuclear Origin of Cancer	William R. Duryee, Ph.D., Department of Pathology, and William P. McKelway, M.D., Department of Obstetrics and Gynecology, George Washington University Hospital
Orthopedics Overseas	Allan M. McKelvie, M.D., Leonard T. Peterson, M.D., and Henry L. Feffer, M.D.
Obscure Abdominal Abscesses—X-ray Diagnosis	Gregory T. Henesy, M.D., and Albert J. Miele, M.D., Department of Radiology, Washington Hospital Center
Pictorial History of Providence Hospital Centennial	John A. Long, M.D., Samuel Zola, M.D., and Philip A. Caulfield, M.D., Providence Hospital
Prevention and Treatment of Recurrent Inguinal Herniae	J. Blaine Harrell, M.D., and Frank D. Allan, Ph.D., George Washington University School of Medicine
Recent Advances in Surgical Treatment of Deafness and New Use of Television as a Teaching Aid	Lieutenant B. M. Webb, MC, USN, Commander G. W. Taylor, MC, USN, and Commander E. W. Bird, MC, USN, U. S. Naval Hospital, Bethesda, Md.

The Assembly's
Scientific Program
has been approved
by the
American Academy of
General Practice
for its members for
a maximum 15 hours'
credit under
CATEGORY I



Simplified Treatment of Maxillofacial Injuries	Leonard R. Rubin, M.D., Meadowbrook Hospital, New York, N. Y., Bertram E. Bromberg, M.D., D.D.S., Kings County Hospital, Brooklyn, N. Y., Richard H. Walden, M.D., D.D.S., Meadowbrook Hospital, New York, and Alfred J. Suraci, M.D., Washington
Smoking—Medical Research and Practice	Lewis C. Robbins, M.D., Public Health Service, U. S. Department of Health, Education, and Welfare
Supracondylar Fractures of the Humerus in Children	John P. Adams, M.D., Washington, and Captain William J. Mitchell, MC, USAF, Westover Air Force Base, Mass.
The Eye 65 and Over	Dan M. Gordon, M.D., New York, N. Y.
Therapeutic Perfusion and Regional Hypothermic Technics	E. L. Marston, M.D., Silver Spring, Md., and Linwood Johnson, Jr., M.D., Bethesda, Md.
The Role of Chemotherapy in the Management of Breast Carcinoma	Jeanne C. Bateman, M.D., and Harry N. Carlton, M.D.
The Use of Cr-51 Labeled Red Cells for Blood Volume Measurements in Obstetrics and Gynecology, and Their Use with a Portable Surface Counter for Intrapartum and Prepartum Localization of the Placenta	Edward E. Gahres, M.D., Salomon N. Albert, M.D., and Samuel M. Dodek, M.D., Washington Hospital Center
Variability of the Radiographic Patterns of Pulmonary Histoplasmosis	Joseph W. Peabody, M.D., Georgetown University School of Medicine, and Sol Katz, M.D., Mt. Alto Veterans Administration Hospital
Virus Cancer Research	National Cancer Institute, Public Health Service, U. S. Department of Health, Education, and Welfare

Motion Pictures

The Committee on Motion Pictures has selected a theme for each day of the Assembly. Films selected for the first day are on the subject of physiology, the second day paramedical films will be shown, and the third day will be devoted to films sponsored by local physicians on miscellaneous subjects. Because of the interest in films on doctor and lawyer relations, the Committee has scheduled the entire group of films produced by the Wm. S. Merrell Company on medical-legal subjects, in coöperation with the American Medical Association and the American Bar Association. A special feature of this year's program will be "Careful, Doctor," a new film on professional liability produced by the St. Paul Fire and Marine Insurance Company. The official program will contain a list of the films and when they will be shown. The motion pictures will be seen in the New York Room, 10:00 a.m. to 5:00 p.m. daily.

Public Meeting

Dr. Overholt

Dr. Shimkin

A feature of the ANNUAL SCIENTIFIC ASSEMBLY in the past will be resumed again this year. A public meeting will be presented on Monday, November 27, at 8:15 p.m., in the Presidential Ballroom. The subject to be discussed by a panel of experts is "What Advice Should Be Given to Patients About Smoking?" The moderator will be Dr. Calvin T. Klopp, Warwick Professor of Surgery, George Washington University School of Medicine. Panelists will include the following: Dr. Richard H. Overholt, Clinical Professor of Surgery, Tufts College of Medicine, Boston; Dr. Grace L. Stone, Chief, School Health Program, D. C. Department of Public Health; Dr. Andrew G. Prandoni, Associate Clinical Professor of Medicine, George Washington University School of Medicine; and Dr. Michael B. Shimkin, Associate Director for Field Studies, National Cancer Institute, Bethesda, Md. This program should not only hold interest for the general public but also for physicians attending the ASSEMBLY.

Dinner Dance, Reception, and Luncheons

Members planning to attend the Medical Society Luncheon (see Calendar of Events) on the opening day of the ASSEMBLY, Monday, November 27, 1961, must register and secure their tickets at the Society's Executive Offices on Friday, November 24, from 9:00 a.m. to 4:45 p.m., and Saturday, November 25, from 9:00 a.m. to 1:00 p.m. Each Active and Life member is entitled to one ticket without charge as long as they last. Associate and Affiliate members and nonmembers of the Society may purchase luncheon tickets at a cost of $4.00 each.

Mr. Devron

Tickets for luncheons given by the George Washington University Medical Alumni Association and the Georgetown University Medical Alumni (see Calendar of Events) may be obtained at the Medical Society's Executive Offices on November 24 and 25, or following the opening of the ASSEMBLY in the Registration Section.

There will be a Dinner Dance on Wednesday evening, November 29, at 8 p.m., preceded by a Reception (cocktails) at 7 p.m. Hosts at the Reception will be Peoples Drug Stores. Music by Devron and his nationally famous orchestra, courtesy of Burton, Parsons & Company. Tickets will be $8.75 each.

Hobby Show

The first Hobby Show in many years will be presented during the coming ASSEMBLY. Some 20 physicians will display their accomplishments in the fields of painting, photography, and woodworking. There will also be those whose avocations consist of collecting stamps, coins, etc. This is always a big attraction and will be found on the Capital Terrace of the Hotel Statler-Hilton.

Dinner for Doctors' Office Staffs

The Ninth Annual Dinner for Doctors' Office Staffs will be held in the Presidential Ballroom of the Hotel Statler-Hilton on Tuesday evening, November 28, at 7:00 p.m. Again, the program will consist of entertainment, which has become so popular at these affairs, courtesy of Russell, Marsh and Kennedy. The dinner will afford physicians the opportunity to show their appreciation for the faithful and efficient service of their office assistants. Invited to the dinner are doctors' secretaries, assistants, nurses, technicians, and receptionists—and doctors themselves. A number have attended in past years and, needless to say, they are most welcome.

Registration

Members of the Medical Society may register prior to the opening of the ASSEMBLY at the Society's Executive Offices in the Medical Society Building, 1718 M Street, N.W., on Friday, November 24, from 9:00 a.m. to 4:45 p.m., and Saturday, November 25, from 9:00 a.m. to 1:00 p.m. The Registration Section at the Hotel Statler-Hilton, located in the Federal Room, will open on November 27 at 8:45 a.m. Visiting physicians and Society members not previously registered may register and secure badges in the Registration Section. A cordial invitation to attend the ASSEMBLY is extended to medical officers of the Army, Navy, Air Force and Public Health Service, physicians employed by the Veterans Administration and other Governmental agencies, and members of the American Academy of General Practice. Invited, too, are residents, interns, senior medical students, dentists, pharmacists, nurses, and technicians. There is no registration fee.

IMPORTANT

All reservations for the Medical Society Luncheon on November 27 must be made by Active and Life members of the Society by 1 p. m. on Saturday, November 25. As has been announced, tickets are available to these members at *no charge*. A block of tickets has been set aside for purchase by guest physicians at the Registration Section on Monday morning, November 27, until 11 a. m.

ANNUAL SCIENTIFIC ASSEMBLY

Calendar of Events

All Meetings at the Hotel Statler-Hilton

MONDAY, NOVEMBER 27, 1961

8:45 A.M. Registration—Federal Room

9:00 A.M. Scientific Exhibits open for inspection in Ohio, California, and South American Rooms and Foyer 3.

9:40 A.M. Welcome: **Donald Stubbs, M.D.,** President, The Medical Society of the District of Columbia

9:45 A.M.-12:00 P.M. Scientific Program Presidential Ballroom

12:30 P.M.-2:00 P.M. Medical Society Luncheon—Presidential Ballroom

Awards Ceremonies:

Presentation of Certificate for Meritorious Service to Preston A. McLendon, M.D., Past President of The Medical Society of the District of Columbia

Presentation of John Benjamin Nichols Award to The Honorable Walter N. Tobriner, President, Board of Commissioners of the District of Columbia

Special Award to Daughters of Charity, St. Vincent de Paul

Program Sponsored Jointly by The Medical Society of the District of Columbia and Medical Service of the District of Columbia:

Speaker: **Robert M. Cunningham, Jr.,** Editor, *The Modern Hospital*

Subject: "Hospitals, Doctors and Dollars"

Mr. Cunningham

2:15 P.M.-5:00 P.M. Scientific Program

8:15 P.M. Public Meeting—Presidential Ballroom

Panel Discussion on "What Advice Should Be Given to Patients About Smoking?" (see page 617)

TUESDAY, NOVEMBER 28, 1961

8:45 A.M. Registration—Federal Room

9:00 A.M. Scientific Exhibits open for inspection in Ohio, California and South American Rooms and Foyer 3.

9:45 A.M.-11:45 A.M. Scientific Program*

12:15 P.M.-1:45 P.M. George Washington University Medical Alumni Luncheon—Presidential Ballroom

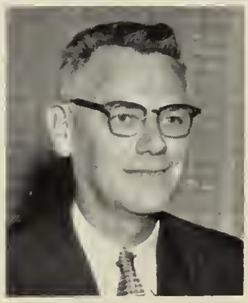
Speaker: **Dr. Thomas Henry Carroll,** President, George Washington University

Subject: "Planning Problems of the George Washington University"

2:15 P.M.-5:00 P.M. Scientific Program

7:00 P.M. Ninth Annual Dinner for Doctors' Office Staffs—Presidential Ballroom

Entertainment (Courtesy Russell, Marsh & Kennedy)



Dr. Carroll

WEDNESDAY, NOVEMBER 29, 1961

8:45 A.M. Registration—Federal Room

9:00 A.M. Scientific Exhibits open for inspection in Ohio, California and South American Rooms and Foyer 3.

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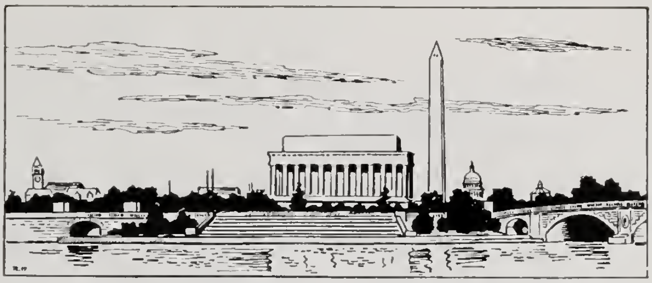
* The Scientific Program will be presented in both the Presidential Ballroom and Pan American Room beginning Tuesday, November 28 (see pages 609-614).

9:45 A.M.-11:45 A.M.	Scientific Program
12:15 P.M.-1:45 P.M.	Georgetown University Medical Alumni Luncheon—Presidential Ballroom Speaker: **The Honorable Brooks Hays,** Assistant Secretary of State for Congressional Relations Subject: "America's Role in the Struggle for Peace"
2:15 P.M.-5:00 P.M.	Scientific Program
7:00 P.M.	Reception (cocktails)—Congressional Room Host: Peoples Drug Stores
8:00 P.M.	Dinner Dance—Presidential Ballroom Dancing and Musical Entertainment by Devron's Orchestra (Courtesy Burton, Parsons & Company)

The Technical Exhibit

The Technical Exhibit will be on display in the Congressional and Federal Rooms and in Foyer 2. A list of the exhibitors follows:

	Booth No.		*Booth No.*
Abbott Laboratories	9	Merck, Sharp & Dohme	21
A. S. Aloe Company	56	Milex of New York	28
Arcum Pharmaceutical Corporation	33	The National Drug Company	3
Ayerst Laboratories	64	Hermien Nusbaum & Associates	49
The Baker Laboratories	5	Ortho Pharmaceutical Corporation	69
Beth-Mont Surgical Supply Company	70	Parke, Davis & Company	2
Beuchler's, Inc.	22	Peoples Drug Stores, Inc.	35
Birtcher Medical Distributors of D. C.	39	Pfizer Laboratories	61
The Borden Company	26	William P. Poythress & Company, Inc.	8
Boyce & Lewis, Inc.	72	Professional Business Management	48
Burroughs Wellcome & Company, Inc.	55	Quaker City Pharmacal Company	68
Burton, Parsons & Company	59	A. H. Robins Company, Inc.	65
Capital Credit Corporation	60	Roche Laboratories	38
The Chloraseptic Company	25	William H. Rorer, Inc.	62
Ciba Pharmaceutical Products, Inc.	29	Ross Laboratories	44
Edward Dalton Company	67	Sanborn Company	19
Davies, Rose & Company	27	Sandoz Pharmaceuticals	58
Desitin Chemical Company	30	W. B. Saunders Company	37
The Dietene Company	42	Schering Corporation	11
Doho Chemical Corporation	20	G. D. Searle & Company	36
Geigy Pharmaceuticals	47	Smith, Kline & French Laboratories	23
Great Books of the Western World	50	Smith, Miller & Patch, Inc.	14
H. J. Heinz Company	57	Special Air Services, Inc.	34
Nelson Kloman Surgical Supply Co.	71	The Upjohn Company	13
Knoll Pharmaceutical Company	10	U. S. Hospital Supply Corporation	45
Lederle Laboratories	1	U. S. Vitamin & Pharmaceutical Corp.	7
Eli Lilly and Company	17	Van Pelt & Brown, Inc.	32
J. B. Lippincott Company	18	Walker Laboratories, Inc.	46
Lloyd Brothers, Inc.	63	Wallace Laboratories	40
Maltbie Laboratories	6	Wampole Laboratories	66
Maxwell & Tennyson	41	Warner-Chilcott Laboratories	16
McNeil Laboratories, Inc.	4	White Laboratories, Inc.	43
Mead Johnson Laboratories	12	The Williams & Wilkins Company	15
Medco Products Company, Inc.	31	Winthrop Laboratories	24



EDITORIALS

POSTGRADUATE EDUCATION

The rapid, near-overwhelming growth of medical knowledge in recent years has placed unprecedented demands upon our system of medical education.

Like ancient Gaul, medical education may be divided into 3 parts: undergraduate education embracing the 4 years of medical school, graduate education or the years of formal training following completion of school, and postgraduate education for the physician after he has completed his formal training. It is the last category which is our immediate concern.

The technics by which postgraduate education is effected are many, and in quality range over the full spectrum. Medical journals provide the best source of readily available knowledge. It is estimated, however, that by 1964, throughout the world, 220,000 medical articles per year will be published in over 13,000 journals. Training in better reading methods for physicians might be likened to the role of fall-out shelters in providing at least partial protection from nuclear explosions.

A number of medical organizations work actively and effectively to provide continuing education. Among these are the American Colleges and the American Academy of General Practice. The medical schools contribute in varying degrees in the field of postgraduate education. Likewise, most hospitals provide educational opportunities for their staff members. A few do an outstanding job.

In our community, as in many others, there are a number of small, private medical societies which exist in some part to educate their members. Most of these societies are of a venerable age and were created at a time when the opportunities to educate and be educated were far more limited than today. Nowadays the social aspects of these meetings hold the upper hand. Anyone who would dispute this should produce an educator who serves cocktails at the entrance to the amphitheatre.

A group recently publicized and highly vocal in postgraduate education are the detail men. Since there are vigorous Congressional Committees to concern themselves with the impact of this group, there seems no need other than to mention them here in passing.

In light of these thoughts a most pertinent question should be asked. What is the role of our Medical Society in all of this? That it has a role is set forth in its by-laws. That it has been vitally active in this role is evidenced by the record. The ANNUAL SCIENTIFIC ASSEMBLY and the annual MIDWINTER SEMINAR are but 2 shining examples. Should we not, however, continually undergo a self-evaluation in order that the community needs may be met most effectively?

In an age when the temporal order reigns supreme, or nearly so, it is vital that the Medical Society not duplicate what is already being done effectively by other groups. It is equally im-

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia

portant that the Society ascertain that the great array of talent about us be made available to its members, in one place or another.

Besides keeping abreast of scientific advances, physicians have a responsibility to be well informed in many other areas—health insurance, medical legislation, economics, environmental health hazards, to name but a random few. It is here, perhaps, that the Medical Society has the greatest opportunity to fill a void in the overall pattern of postgraduate education.

In its deliberations on the role of the Medical Society, the Committee on Postgraduate Medical Education welcomes the views of its members who are to be served.

JAMES E. FITZGERALD, M.D.
Chairman, Committee on
Postgraduate Education

COMMON SENSE IN THE PREVENTION OF DISEASE

That the old order changeth to make way for the new is indeed true in the ever-changing world of preventive medicine. Not too many years ago it was the universal practice to seek the services of the family physician only when all other aids had failed and the patient was no longer physically able to make it on his own. And all too frequently at this point the physical status of the patient precluded the need of a physician. Trust in the Lord and pray for a miracle was the watchword of the day. A goodly segment of the population still subscribes to this form of medical care.

Under the ever-expanding growth of medical knowledge, the development of better methods of communication, and the growth of voluntary health agencies the new era of preventive health measures has come into being. The pendulum of health care has about completed the full swing from the one extreme, that of almost complete rejection of physical ailments, to the other extreme of almost complete preoccupation with health needs. Is this a good trend?

Medical literature is replete with examples of procrastination in seeking medical aid for known disabilities until the services of the physician are of little value to the patient. The history of Mrs. Brown, who put off seeing the doctor about the lump in her breast until she became bedridden with pain in her leg from metastatic cancer to her spine, endorses the fallacy in this form of care. Examples of complete preoccupation with real or fancied illnesses while the patient succumbed to an unrelated illness are likewise available. The case of the eminent obstetrician who was completely preoccupied with the care of his ulcer and died from a heart attack lends mute testimony to the inherent inadequacy in this form of care.

From the foregoing it is clearly evident that both extremes in regard to health needs for the patient are equally dangerous. Some patients will live out their natural life span with a minimum of health care; others will succumb to unexpected disease while receiving the best of preventive care. Somewhere between these two extremes lies the common-sense approach to the prevention of disease which is worthy of mention. In the light of what we know a conservative step in this direction would be a complete physical check-up at least once a year. More frequent examination would be determined by the findings of the examining physician. Beyond this point, except to promote undue concern, additional examinations contribute little to the health needs of the patient.

Complete medical security is a nebulous quantity and just as difficult to obtain as it is to raise the blood calcium levels by taking milk baths. The middle of the roadway is the best.

J. KEITH CROMER, M.D.

ANOTHER VIEWPOINT ON DRUGS

The recent Kefauver investigation of the drug industry produced many headlines of a sensational character, all tending to incriminate this industry with some sinister plot against the consumer. One may recognize this onslaught as another phase of the insidious and relentless drive to embarrass and intimidate organized medicine, the overall purpose being the socialization of our profession. The powers that be are endeavoring to prove to the American public that only through strict government control and supervision is it possible for the average citizen to obtain the best medical care for the least possible cost. This we categorically deny.

Our system of economics, as a capitalistic nation, is based on legitimate profit. Why, then, does Senator Kefauver differentiate between the pharmaceutical industry and say, for instance, the food-processing industry? We mention the latter because food also is essential to life. This is not to condone excessive profits and, perhaps, the collusion of some drug companies to keep prices high. When guilt is established, correction is indicated, but why indict an entire industry for the very few wrong-doers?

What is most irritating is the tendency to emphasize only one side of the issue. It is important to take a look at the other aspects of the situation. The ability and willingness of the drug industry to invest vast sums in research, in new methods of production, and in factories, as well as their proficiency in mass production and rapid distribution, have contributed greatly to medical knowledge and to the service that we, the members of the medical profession, are able to give to the public. Their coöperation, along with the afore-mentioned facts, has produced, probably, the finest system of medical practice and care in the world.

These companies are not as cold-blooded and mercenary as the Senator would lead us to believe. They furnish gratis many expensive drugs for needy patients at doctors' requests. They endow clinics in hospitals, sponsor fellowships and scholarships in medical schools, and provide grants for individual and collective research.

The antibiotics were singled out, during the period of investigation, as typically overpriced items. Twenty-five years ago patients suffering from bacterial pneumonia were treated with codeine, aspirin, mustard plasters, etc. The cost of these was low, as they would be today, but when one compares the loss of time and productivity as a result of the complications, and length of convalescence with the rapidity of recovery today, the total cost to the patient is much less now than in the past.

What about the epileptic of that same era? The treatment then consisted of barbiturates almost exclusively. How many did we really rehabilitate with this regimen? Very few, until the modern anticonvulsants became readily available. Certainly these are more expensive than, for instance, phenobarbital, but a person gainfully employed, with seizures controlled, can well afford to pay for this relatively slight increase in cost.

We are not here to bury the Senator nor to praise the drug companies, but, rather, to present another viewpoint in this controversy in the hope that when and if the investigations are resumed, they will be done in a spirit of fair play.

IRVING BURKA, M.D.

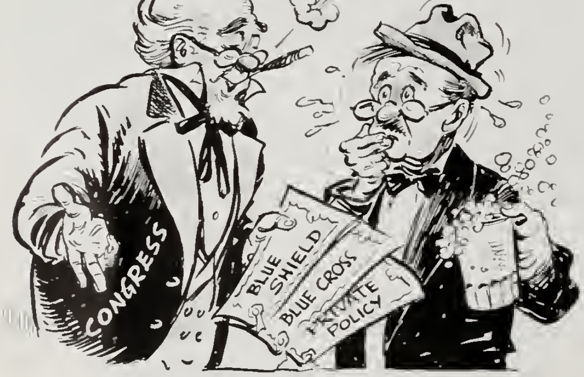
THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

IN & OUT OF FOCUS

By the Observer

A Hollow Victory?

The Medical Society's Executive Board was much elated when the AMA House of Delegates, at its meeting in Washington last November, adopted a resolution directing the Association's Board of Trustees and Council on Medical Service to assume immediate leadership in the development of a national voluntary health insurance program. The resolution not only contemplated "consolidating the efforts" of the AMA, Blue Shield, Blue Cross and the American Hospital Association but similar efforts of private insurance carriers.



"Fine! But they don't cover your hiccups!"

Late in August, when this column was written, nearly 9 months had passed and there was still little evidence of real progress toward the realization of the above objective. True, meetings had been held for the purpose of discussing procedure, but to the best of your Observer's knowledge, little else had been done.

This, to say the least, is disappointing. As your Observer pointed out last month, there apparently is no feeling of urgency on the part of the AMA, a view which the officials of our Society do not share. Either the Association's leaders are confident that Government intervention is no longer a real threat or it is their belief that there is ample time in which to evolve a national prepayment medical program which will meet the needs and demands of the people. Another reason suggested is that they wish to remain neutral where Blue Shield and commercial insurance companies are concerned. Whatever the reason, as the Society's officers see it, there is little to cheer about in this situation.

Your Observer is of the opinion that physicians in Washington are more conscious of the controversy over methods of providing medical care than most of their colleagues in the states. This is largely due not only to the arguments pro and con which appear with greater regularity in District newspapers but to firsthand reports on debates on the subject in the Congress. It would be surprising, then, if they were not better informed and took a more realistic view of the socioeconomic problems facing medicine than their confreres elsewhere.

Leaders in both the Blue Shield and the commercial insurance industry in the District of Columbia agree that the combined efforts of their respective national organizations are required to stem the tide toward a Government system of medical care. They are not too confident that voluntary health insurance will be capable of providing protection for the over-65 age group without subsidy. They point to the Federal Employees Health Benefits Act as a program in which the Government, Blue Shield and commercial insurance companies coöperate to their mutual satisfaction. They deplore the delay in meeting the problems involved in the expansion of voluntary health insurance programs because they are deeply concerned that "private enterprise" in the health field will not survive unless there is prompt, constructive action by the medical profession.

As months pass, with no visible signs of progress, the depressing thought occurs that the victory in the House of Delegates over which the Society's official family was so elated last November may prove a hollow one.

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AMA Tightens Discipline

The AMA House of Delegates at its meeting in New York last June took unprecedented steps to discipline Association members whose behavior reflects unfavorably on the medical profession. Its action followed the report of the Medical Disciplinary Committee appointed by the AMA Board of Trustees in November 1958.

In its conclusions the Committee stated that on the whole there were adequate medical disciplinary mechanisms in organized medicine to cope with the situation but that the frequency and effectiveness of their use were less impressive. There has been a failure in some areas, the Committee stated, to act promptly, impartially, and objectively when the necessity arose.

Specific recommendations of the Committee which were adopted by the House included the following:

Medical Schools. That medical schools sponsor "a required course in ethics and socioeconomic principles";

That they coöperate with state boards of medical examiners and state medical associations to make certain "that students become acquainted with practical problems of ethics and socioeconomic principles and their proper solutions."

State Boards of Medical Examiners. That state boards of medical examiners "include in all examinations for license questions on ethics and proper socioeconomic practices."

That in coöperation with state medical associations they review the disciplinary provisions of the state's medical practice act and recommend whatever amendments are necessary "to insure that they are effective in the light of current social and scientific progress";

That they request the Federation of State Medical Boards to designate a committee to develop model rules of procedure in disciplinary cases and urge their adoption by state boards;

That on request the American Medical Association make available to the Federation for this purpose such special staff assistance as it requires;

That the state boards of medical examiners consider "making discipline their primary responsibility";

That they make annual reports of their disciplinary activities to the Governors of the states, forwarding copies to their state medical associations, to the AMA, to the Federation of State Medical Boards.

Medical Associations. That state medical associations be asked to concern themselves with disciplinary programs of their county medical societies;

That they review their disciplinary programs critically and make such changes in disciplinary mechanisms as are indicated;

That indoctrination programs be developed for use by their component societies to acquaint new members with ethical principles and acceptable socioeconomic practices;

That closer attention be given complaints in regard to overcharging, medical advertising and solicitation of patients, and abuse of prepayment and insurance mechanisms;

That grievance committees be utilized as "grand juries" and empowered to initiate action against an offender so as to obviate the necessity of making an individual member of a medical society complain against a fellow member;

That bylaws of both state and county medical societies be amended to make their disciplinary programs more effective.

American Medical Association. That the Association become "more aggressive and active in supplying advice and assistance to state boards of medical examiners and state and county medical societies in all aspects of medical discipline";

That the AMA in coöperation with the Federation of State Medical Boards, the Council of State Governments, and other interested groups draft a model medical practice act;

That state medical associations be encouraged to report annually to the AMA all major disciplinary actions;

That the Federation of State Medical Boards be encouraged to assist in developing a means whereby each state board of medical examiners will report promptly all major disciplinary actions taken by them to the AMA;

That copies of the Principles of Medical Ethics be distributed annually to all senior medical students in the United States;

That a guide on the subjects of medical ethics, medical practice acts and proper socioeconomic conduct be prepared for use by physicians called upon to lecture in medical schools, hospitals and before medical societies;

That the Association's bylaws be amended "to confer original jurisdiction on the Association to suspend or revoke the AMA membership of a physician guilty of a violation of the Principles of Medical Ethics . . . regardless of whether action has been taken against him at local level";

That adequate lectures on ethics and proper socioeconomic practices be given in all hospitals approved for internship or residency training;

That the AMA "instruct its representatives to the Joint Commission on Accreditation of Hospitals to urge the Joint Commission to adopt, as a requirement for accreditation, the giving of adequate lectures on ethics and proper socioeconomic practices each year within the hospital."

Upon the adoption of its recommendations, the Medical Disciplinary Committee was relieved of its duties, these being assigned to the Association's Judicial Council.

Of particular interest to the District Medical Society is the proposal that the AMA draft a model medical practice act which would include grounds for suspension and revocation of licenses by the District's Commission on Licensure. Basis for such discipline, according to the Medical Disciplinary Committee, would include fraud; performance of unlawful abortions; commission or conviction of a felony; addiction to a drug or intoxicant to such a degree as to render the licensee unsafe or unfit to practice medicine and surgery; sustaining any physical or mental disability which makes further practice of medicine dangerous; unprofessional conduct likely to deceive or harm the public; performing any act to assist an unlicensed person to practice medicine; practicing under a false name; advertising in any unethical or unprofessional manner; and violation of privileged communication.

Early in May of this year the Society's Committee on Public Policy had before it a proposed bill to amend the Healing Arts Practice Act. Among its provisions were sections providing for discipline of physicians licensed to practice in the District of Columbia. These were unsatisfactory to the Committee, which rejected them. The Executive Board supported the Committee but took the position there was need for disciplinary legislation and requested the Committee to submit its proposals. At the time this was written the Committee had not had an opportunity to consider or to draft the requested legislation.

★

Body, Mind and Spirit

Prior to the appointment of the Society's Liaison Committee with the Clergy a select group of physicians and clergymen met to discuss the need for such a body. The existing relationships were explored at length, in the course of which a number of situations were offered as evidence of the need for better understanding and closer coöperation. It was suggested by one of the clergymen present that a point of beginning might be the respective roles of the doctor and the clergyman at the time of terminal illness. The group unanimously favored the suggestion.

"Praise the Lord . . . And pass the anesthesia"

Although the Committee has not pursued this matter further, the subject will undoubtedly be discussed at the first Davidson Lecture on Religion and Medicine on November 8. Dr. Frank J. Sladen, a member of the Board of Trustees of the Henry Ford Hospital, Detroit, Michigan, and long active in religious organizations, will be the lecturer. Following his address, a panel consisting of Rabbi Norman Gerstenfeld, Washington Hebrew Congregation; the Reverend Thomas J. O'Donnell, S. J., Regent, Georgetown University School of Medicine; Canon Richard Williams, Episcopal Church House; and Dr. John Parks, Dean, George Washington University School of Medicine, will discuss the points made by Dr. Sladen and answer questions.

This program is somewhat similar to a symposium sponsored by the Section on Historical and Cultural Medicine of the New York Academy of Medicine under the title of "Man, Medicine and the Ministry." Your Observer noted that one of the panelists, Dr. Thomas N. Sheen, Associate Attending Physician, St. Clare's Hospital, New York City, emphasized the relationship which should exist between the clergy and physicians in terminal illness.

"In life, as in proximity to death," he said, "closer coöperation between medicine and the ministry would seem desirable, but they come together, usually at the time of approaching death, when time is a limiting factor to effective action or understanding. It is in this moment of crisis and in the face of death that we deal with the patient's hope for life and his rejection of death. Can anyone feel confident that he has the right to deny the patient access to either medicine or the ministry? Only the patient can really decide this issue.

"Medicine and the ministry both give help as well as hope in critical times when man's greatest need is hope, both for the present and for the future. 'His hope is not what we call optimism. Optimism is easy; it consists in supposing that everything is sure to work out in the end, automatically. Hope is the attitude of a free will which has already reached the limits of its own activity.'

"It is, therefore, in the dignity of man's choice and his decision that his basic problems must be resolved. Can this be accomplished by his own devices or by a single discipline? Those who believe this to be true fall into the same error as those who believe that a change in economic conditions of life is sufficient to transform mankind. Man needs help, since by his nature he has always been in conflict with the world about him. Albert Camus, the late Nobel Laureate, describes the monstrous absurdity of a world at odds with mankind, which he believes leaves no option except revolt. We can, however, adopt another alternative to revolt and consider the true spiritual quality of man, that conscience itself requires that at least we should say 'no' to a world we cannot change, and may not tolerate. Do we not owe to man, in his difficulties, all that science can contribute to his physical and mental health? And does his religion not contribute to his spiritual welfare and to the attainment of his eventual and perhaps his eternal goal? Medicine and the ministry both labor for man, who is today the patient, tomorrow the dying man, the day following, the lifeless thing, cold in death. And they should not meet at a time of crisis simply to determine the order of their precedence. The basic human qualities of the physician and the clergyman can always be employed not only to discover the mystery of man, but also seek to enlighten him, so that even the last forces of life may be awakened.

"As physicians, we may fail in our obligation to man if we allot to the minister, priest or rabbi only the task of conducting a suitable burial ceremony. We should remember that for the man who is truly religious, the support of his religion is not just to provide a less agonizing death, but also to provide a better life, to make physical and mental suffering not only more endurable but even inspirational and purposeful."

★

Private vs. Public Spending

"The central domestic issue of the 1960's," Edward T. Chase writes in the August issue of *The Atlantic Monthly*, is that of private versus public spending and "the manner in which the Kennedy Administration attempts to resolve this problem will determine our governmental framework for a generation. In particular, it will establish the pattern of relationships between the Federal Government and our other great power system, free enterprise, or what economists call more precisely the price-market system."

Professor Walter W. Heller, Chairman of the Council of Economic Advisers, Mr. Chase states, suggests that Government intervention in the economy may not need to be "directing, but simply stimulating." On the other hand, Federal Reserve Board Chairman William M. Martin, Jr. is of the opinion that "general stimulation of the economy will not be enough" and that the Government must intervene not only as to unemployment but as to many other economic problems facing the country.

What he calls the "urgency of the growth debate" is understood only in the light of 2 basic forces: (1) growth of the American population, its changes in age complexion and its massive shift to urban and suburban centers, and (2) technological progress. As to the latter, he cites medical care for the aged as "a vivid example fraught with political tension."

"Many readers, like the author, have parents over 65. According to official Government reports, 55 per cent of all people 65 and over (including those still working) have less than $1,000 cash income per year. About a third have liquid assets up to $200, in case of an emergency. Only a tiny fraction have substantial assets readily convertible to cash. And illness strikes the aged 2 to 3 times more frequently than the rest of the population; their hospitalization is much longer—the costs run 120 per cent higher than those for the rest of us; and for drugs and medicines the disproportion is even greater. Meantime, medical costs, which have doubled since the War, continue to spiral, with hospital costs advancing relentlessly 5 to 6 per cent each year. Scientific progress has meant marvelous but very expensive new equipment, drugs, and procedures.

"Technology has equipped medicine with the means to control the death rate and thus make those over 65 the Nation's fastest growing population group, and at the same time it has made our industrial plant so productive as to eliminate the aged as as essential part of our work force. Thus, relatively few can earn even minimal annual incomes.

"The elderly, increasing in number at the rate of 1 million every 3 years, while tolerably fed, housed, clothed, are largely unprotected by health insurance. Only about 40 per cent have even fragmentary health-insurance coverage, according to the Department of Health, Education, and Welfare. Even if the growth of health insurance continues at the booming rate of earlier years, still only about 56 per cent of the aged will be covered by 1965. Yet, after food, clothing, and shelter, medical care has come to be accepted as the fourth basic social right, a right regardless of income.

"What bearing has this situation on the question of growth and private versus public spending? This much is clear: a rise in the economic growth rate by itself is beside the mark. Though economic growth is necessary for many reasons, we are learning that growth in a modern industrial society also can be dismayingly irrelevant. In the instance at hand, the bulk of the elderly lack the financial means to afford the health insurance they desperately require; whereas the insurance industry, operating in the market system, cannot hope to insure the aged at premium rates on which the companies can break even, let alone make a profit, for these rates are set by the costs of medical care in the first place.

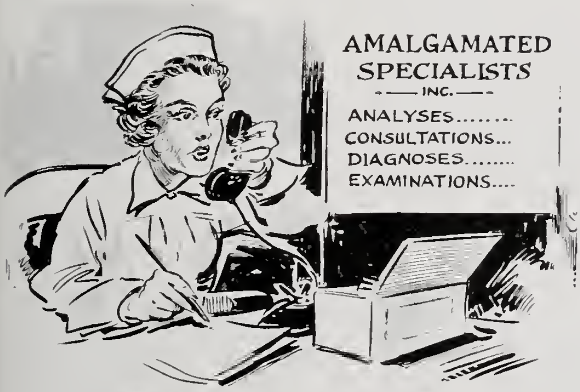
"What we witness, in short, is the spreading phenomenon that goes to the root of the growth debate: the incapability of the price-market system, for technical reasons beyond its purview, to supply an essential public need. The only recourse is Government support or provision of the service. And, given the strapped financial situation of the states, the Federal Government usually must step in."

★

Telephone Listings

From time to time, listing of physicians' specialties in the classified section of the Washington Telephone Directory has been proposed. Succeeding committees of the Medical Society have invariably opposed it for the reason that there are no controls. Qualified or not, a physician may insist on a specialty listing. Publishers of the directory will not for policy reasons deny his request.

In December 1960 the Secretary of the Society received a copy of the Regulations for Listings in the Physicians and Surgeons Column of the Classified Section of the Virginia edition of the Washington Metropolitan Telephone Directory from Dr. James M. Moss, Chairman of the Medical Council of Northern Virginia. These provided that no bold-faced type be used "under any circumstances by any person or group"; that medical telephone exchanges may purchase advertising space in the classified section but not in the alphabetical directory; that advertising space may not be purchased by medical groups or clinics; that medical buildings should not be listed under the heading physicians and surgeons as "they are not engaged in the practice of medicine"; that office hours or "by appointment" may be listed; and that specialty designations are permitted in the classified section of the Virginia edition of the alphabetical telephone directory but are not permitted in the Washington classified directory. A specialist was defined as a physician "qualified to take the appropriate board examination" and who limits his practice "within the reasonable boundaries of that specialty." There followed a list of approved specialty designations.


AMALGAMATED
SPECIALISTS
INC.
ANALYSES........
CONSULTATIONS...
DIAGNOSES........
EXAMINATIONS....

"You want WHAT? . . . Just a plain doctor?"

These Regulations were brought to the attention of the Society's Classification Committee, which voted unanimously to oppose specialty listings, thus upholding previous actions of the Society's committees.

As members know, the Committee has classified the Society's membership for several years according to type of practice. This list is used by MEDICAL BUREAU, the Society's telephone exchange, in responding to inquiries from the public.

Rules adopted by the Society to guide the Committee in preparing the list follow:

1. To be classified as a specialist, a physician must be recognized as such by a Class A hospital or by a group of specialists or specialty societies approved by the Classification Committee.

2. Each physician appearing on the list of specialists will be required to state his qualifications.

3. Physicians claiming a specialty must limit themselves (80 per cent) to a single field; however, they may claim a subspecialty.

4. Qualifications of physicians claiming specialties will be investigated by members of the Committee in their respective fields. Where there is a Section of the Society on the specialty, the qualifications of the applicant must be reviewed by the Section before approval is granted.

5. The classification list will be submitted annually to the Executive Board for its approval.

6. Every newly elected member of the Society shall be given a classification form and instructed to fill it out immediately.

7. Every 3 years all members of the Society will be requested to state whether they wish to make any change in their classification.

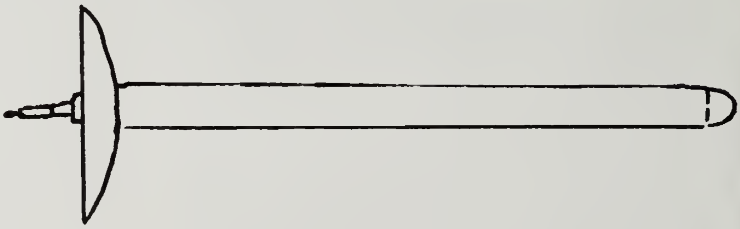
To the best of your Observer's knowledge, our Society is one of the 2 medical organizations in the country which classifies its members in the above manner. The availability of information about the medical qualifications of physicians is publicized in the MEDICAL BUREAU display

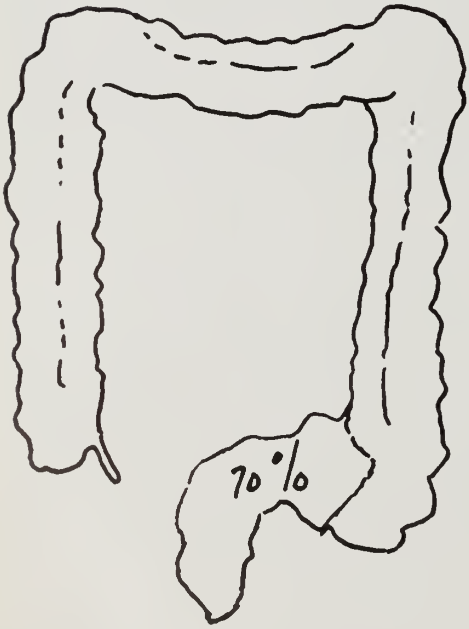
(Continued on page 644)

Doctor: 70,000 cases of cancer of the colon and rectum will be diagnosed this year. Two-thirds of these patients will die. **MANY COULD BE SAVED BY EARLY DIAGNOSIS.**

Digital Examination First

Proctosigmoidoscopic Examination Second





Will help diagnose 70 per cent of cancers of the colon and rectum if these examinations are done routinely each year.

Introducing

"Life Story"—a new lay cancer education film stressing the importance of a routine proctoscopic examination.

"Technique of Proctoscopy"—an excellent professional teaching film.

Both films available on loan from—

American Cancer Society
District of Columbia Division
810 18th Street, N.W., Washington 6, D.C.
Executive 3-3690

ANNUAL REPORTS

REPORT OF THE CHAIRMAN OF THE EXECUTIVE BOARD

Although many important decisions were made by the Executive Board since the last Annual Business Meeting, none was of more significance than its approval of a resolution on prepaid medical care. The resolution was introduced in the AMA House of Delegates at the Washington meeting in the latter part of November, 1960, by the Society's delegates and was with minor changes unanimously adopted. It reiterated the Society's position that steps should be taken by the AMA, in coöperation with Blue Shield, Blue Cross, and the American Hospital Association, "to assume immediately the leadership in consolidating efforts [toward] the maximum development of the voluntary nonprofit prepayment concept to provide health care for the American people." It is to be hoped that the disappointing delay in energetically implementing this resolution is not indicative of the fact that the AMA fails to recognize the true nature and urgency of the socioeconomic problems which confront the medical profession.

As in the past, this report concerns itself largely with the principal activities of the Board since the last Annual Business Meeting.

Postgraduate Education

The 1960 Annual Scientific Assembly was cancelled for the reason that the AMA held its Clinical Meeting in Washington, November 28–December 1. Dr. Donald Stubbs, then President-elect, was Chairman of the Local Committee on Arrangements. Serving with him were the following committee chairmen: Program, Dr. Alfred Brigulio; Scientific Exhibit, Dr. J. Ross Veal; Color Television, Dr. Charles A. Hufnagel; Motion Pictures, Dr. Edward W. Nicklas; Registration, Dr. Oscar B. Hunter, Jr.; Housing, Dr. Ralph D. Whitley; Entertainment, Dr. Marcel Foret; Women Physicians, Dr. Josephine E. Renshaw; and Publicity, Theodore Wiprud. The meeting was highly successful, the registration totaling 8,179. It was one of the largest Clinical Meetings to date.

Unfortunately, the Midwinter Seminar had to be abandoned because of the many demands made upon the Society when its program is usually planned. Plans now are to hold the Seminar in February 1962.

The Board was highly pleased with the reception accorded the Postgraduate Course in the Basic Sciences late in the fall of 1960.

In midyear Dr. James E. Fitzgerald succeeded Dr. W. Proctor Harvey as Chairman of the Committee on Postgraduate Education. He is gathering information prior to meeting with his Committee in the fall of 1961.

As indicated in previous reports, there is urgent need to reduce the number of medical meetings. The Committee has endeavored, with fair success, to accomplish this in coöperation with the District's three medical schools. At its meeting in April 1961, the Board voted that the Committee be requested to confer again with the Deans of these schools for the purpose of further developing under joint sponsorship a coördinated program of postgraduate education for physicians in practice.

At the same time the Board voted that the Committee be asked to "develop an educational program for interns and residents dealing with problems of a general nature which confront physicians in practice." The latter was suggested by the Secretary of the Society, who has for a number of years addressed senior medical students on these subjects. He is of the opinion that a more propitious time to do this is during internship and residencies than in the second year in medical school. The Board agreed.

Public Health

For several years the Committee on Public Health has concerned itself with the nursing home situation. It has been a frustrating experience with little to show for the Committee's time and effort.

On March 3 the Committee again discussed the situation, which was becoming more acute, it having been announced in the press that District Government agencies charged with the responsibility for licensing nursing homes were prepared to enforce all regulations immediately. This, in the Committee's opinion, would have resulted in a critical shortage of beds. The Committee voted that in the event the situation required, it should lend every assistance possible to patients released from nursing homes in the District and unable to obtain substitute accommodations. The Executive Board approved of the Committee's action. As the eventuality anticipated did not materialize, no action on the Committee's part was necessary.

On April 11, 1961, the Committee voted to schedule a meeting to which would be invited representatives of all organizations in the District of Columbia having an interest in the nursing home situation. However, it was agreed that before this was done discussion should be had with Mr. Walter N. Tobriner, President of the District Board of Commissioners, with the view of obtaining his endorsement. The Chairman and the Secretary talked to Mr. Tobriner, who was not enthusiastic about the proposed meeting. In his opinion, little would be accomplished.

The Committee is still wrestling with this problem. It is hoped that tangible results can be reported in the Chairman's Supplementary Report at the Annual Business Meeting.

AGING

Representing the Dristict's Council on Aging at the White House Conference on Aging, January 9-12, were the following members of the Society's Committee on Aging: Drs. Jack Kleh, Chairman, Andrew G. Prandoni, Otis R. Farley, and Mr. Theodore Wiprud. A report on the Conference appeared in the MEDICAL ANNALS in March 1961.

Recently the Committee voted to sponsor what is to be known as the Institute on the Comprehensive Approach to the Medical Care of the Aging in the fall of 1961. Some sessions of the Institute will be devoted to subjects of interest to physicians only, others to the laity. Plans for the Institute had not been developed when this report was prepared.

MEDICAL CARE

The Executive Board established the Review Board for Prepaid Medical Insurance for the purpose of determining whether questionable physicians' charges to subscribers to Major Medical coverage submitted to it by Medical Service of the District of Columbia or the D. C. Chapter of the Health Insurance Council were "customary and reasonable." Following its first meeting, the Review Board adopted the following procedures which were approved by the Executive Board:

"1. That until the Board reaches a decision, the physician involved remain anonymous;

"2. That where it is the judgment of the Board that the charges are not customary and reasonable, Medical Service or the D. C. Chapter of the Health Insurance Council be so informed;

"3. That Medical Service be notified it is the Board's understanding that the Chairman of the Service's Executive Committee will first inform the physician involved of the Board's recommendations and that the latter will have 2 weeks in which to request the Review Board to reconsider its recommendations; that in the instance of the D. C. Chapter of H.I.C., a similar procedure be followed except that the chairman of the chapter notify the physician of the period in which he can request reconsideration."

* * * * *

At the direction of the President of the Society, the Secretary communicated with the Sections on Internal Medicine, General Practice and Pediatrics to determine the extent to which their members made home calls. The following is quoted from the responses received:

The Chairman of the Section on General Practice stated that "Most of our men make home calls if necessary on their own patients. . ." and "It is our opinion that all doctors should display prominently in their offices a notice that they do or do not make home calls."

The Chairman of the Section on Internal Medicine reported that of 250 questionnaires distributed to the Section's membership, of which 120 had been returned, 115 signified they made house calls, only 5 did not. Twenty-five per cent make house calls on non-referred patients. Comments of those who did not make house calls on non-referred patients indicated this group of patients were usually referred by them to the Medical Bureau.

The Section on Pediatrics reported that the practice of not making home calls is generally widespread and accepted by pediatricians throughout the country. They maintain they can give better overall service to sick children in their offices because of (1) the saving of their own time, (2) better examining conditions, and (3) the availability of laboratory facilities.

The Section was critical of physicians going off duty "without making any arrangement for a covering physician." It stressed the importance of individuals having a family physician.

The Board directed the President of the Society to comment on the home calls situation in the MEDICAL ANNALS. His Page in the August issue was devoted to this subject.

* * * * *

Upon recommendation of the Committee on Medical Care, the Board endorsed in principle the Professional Services Index for National Accounts adopted at the Annual Business Meeting of Blue Shield Plans, held in Chicago, April 16, 17 and 18. The Index had been submitted for approval at the Annual Business Meeting of Medical Service of the District of Columbia and adopted by participating physicians. The Index would assure the uniformity of the Relative Value Scales used by all Blue Shield Plans which participate in the National Account Agreement.

The Board renewed the Medicare contract with the Office of Dependents' Medical Care for the year beginning August 1, 1961. Last year's negotiators, Dr. C. Willard Camalier, Jr. and Dr. Edward W. Nicklas, reviewed the new contract. Following their examination, Dr. Camalier informed the Secretary under date of July 24, 1961 that after due consideration he and Dr. Nicklas had agreed that the proposed changes and adjustments were satisfactory and that the schedule of allowances was the same as approved by the Medical Society in 1960.

PUBLIC POLICY

A communication received from the American Medical Association, November 22, 1960, stated that its Council on Legislation was considering the establishment of the National Medical Political Action Committee. The Board voted to inform the Association that it deemed the organization of the proposed NMPAC "unwise." The President informed the Association to this effect and, at the Board's request, urged the immediate implementation of the resolution on prepaid medical care adopted by the House of Delegates at its meeting in Washington in 1960. (See "A Victory Won," In and Out of Focus, January 1961, pages 33–35.)

The Committee on Public Policy recommended, and the Executive Board approved, proposed legislation submitted by the Commission on Licensure of the District of Columbia authorizing the Commission to accept certificates from the Educational Council for Foreign Medical Graduates or other organizations approved by the American Medical Association, the Association of American Medical Colleges, the Federation of State Medical Boards, and the American Hospital Association as being qualified to examine and evaluate the professional skill, training and qualifications of graduates of foreign medical schools.

The President of the Society appeared before House and Senate committees testifying in favor of H.R. 8032, which incorporated the above provision, and which was subsequently enacted into law.

The Board agreed with the Committee that legislation relating to the discipline of physicians submitted to it by the Commission on Licensure be disapproved; however, the Board requested the Committee to develop a substitute amendment to the Healing Arts Practice Act providing for disciplinary measures and that its attention be directed to the Medical Disciplinary Law now in effect in the State of Washington. The Committee had not had an opportunity to comply with the Board's request when this report was prepared.

The Board agreed with the Committee that the Corporation Counsel should be asked for an interpretation of the Healing Arts Practice Act as it relates to physicians practicing in Washington hospitals from nearby Maryland and Virginia who do not have District licenses. The Healing Arts Practice Act as it is presently written does not require these physicians to have more than "borderline certificates." The Board's position was that they should be licensed and so informed the Commission on Licensure. The Board was subsequently notified that the Commission had requested the Corporation Counsel to prepare legislation requiring licensure.

Both the Committee and the Board supported the AMA's position in its opposition to H.R.4222 (King-Anderson Bill) which would provide hospital and medical care for persons over 65 under the Social

Security Act. The Board's position, as set forth in the communication addressed to the House Ways and Means Committee by the President of the Society, appears under "Correspondence" in the September issue of the MEDICAL ANNALS.

Among other actions of the Committee which the Board approved were its opposition to the Unincorporated Business Tax; support of the AMA with respect to the restoration of the Office of Assistant Secretary of Defense (Health and Medical Care); support of S.182 providing for the establishment of a convalescent hospital in Washington; and opposition to H.R.436, "a bill to create a presumption that certain impairment of health caused by hypertension or heart disease of a Federal or District of Columbia employee is incurred in line of duty for purposes of certain retirement and disability compensation laws or systems."

MEMBERSHIP

A canvass of the Society in March, 1961, disclosed that 353 were in favor of establishing a subscriber group to Medical Service of the District of Columbia; 81 stated they already participated in other health insurance plans; and 49 were opposed to participation. On the basis of these returns, the Secretary was directed to endeavor to form a group. Negotiations are now under way with Service officials. It was decided not to solicit subscribers until early in 1962.

The question arose as to whether Membership Luncheons should be continued in the same manner as heretofore. Although well attended, many new members had not taken advantage of them, the response being 50 per cent of those invited. The matter was discussed with the Board of Credentials, which was of the opinion that this was a problem to be dealt with by the Executive Board. It was finally decided that all new members of the Society be required to attend Membership Luncheons some time during their probationary year.

The Board was notified by Dr. Wallace M. Yater, Chairman of the Classification Committee, that he had canvassed members of his Committee, all of whom were still opposed to the listing of physicians' specialties in the Classified Telephone Directory. This matter had been brought up again following recent action of the Medical Council of Northern Virginia which favored the listing of specialties of physicians in their local telephone directories.

At a later meeting the Board voted favorably, on recommendation of the Committee on Medical Ethics and Professional Conduct, that the membership be informed it was opposed to bold face type listing of individual physicians, clinics and medical office buildings in both the classified and the alphabetical telephone directories. Mr. A. R. Stratton, Staff Assistant of the Chesapeake and Potomac Telephone Company, who had written the Chairman of the Committee, was informed to this effect.

RELIGION AND MEDICINE

The Committee on Liaison with the Clergy was created early in the year upon recommendation of several members of the Society. Its first proposal was that an annual lecture be inaugurated to which physicians and the clergy would be invited; the purpose: to effect a closer and more satisfactory relationship between the 2 callings. The Board approved of the proposal and voted that the monies accruing to the Davidson Lecture Fund be used for the purpose of obtaining a lecturer and paying expenses incident to the lectures and that they be designated "The Davidson Lecture on Religion and Medicine."

AWARDS

The Board chose Dr. Preston A. McLendon to receive the 1961 Certificate for Meritorious Service . . . . Endorsed Dr. Josephine J. Buchanan for the Physicians' Award for outstanding contributions to the welfare and employment of the physically handicapped workers of the country. The Award is presented annually by the President's Committee on the Employment of the Physically Handicapped . . . . Recommended Dr. Herbert S. Gates, Chairman of the Traffic Committee, to the A. H. Robins Company for its 1961 Community Service Award. . . . Voted that a special citation be presented to the Daughters of Charity of St. Vincent de Paul for a century of outstanding service to the people of Washington. The Daughters have been in charge of the nursing service at Providence Hospital, Washington, D. C., since that institution was opened in 1861. . . . Approved, on recommendation of the Committee on Public Information and Education, that the JOHN BENJAMIN NICHOLS AWARD be presented to Mr. Walter N. Tobriner, President of the District Board of Commissioners, for distinguished service in the health field to the people of the District of Columbia.

REPRESENTATION AT NATIONAL MEETINGS

The Board authorized the following members to represent the Society at the meetings indicated following their names:

- DR. ZIGMOND M. LEBENSOHN—Seventh Annual Conference of Mental Health Representatives of State Medical Associations, sponsored by AMA Council on Medical Health, Chicago
- DR. HAROLD M. HOBART—Eighth National Conference on Physicians and Schools, Chicago
- DRS. FRANK PELLEGRINI AND RALPH M. CAULK—AMA Medical Legislative Conference, Chicago
- DR. JAMES E. CHAPMAN—AMA Conference on Disaster Medical Care, Chicago
- DRS. DONALD STUBBS, JAMES E. FITZGERALD, AND ALFRED BRIGULIO—Conference of AMA's Council on Medical Education and Hospitals, New York City
- DR. PAUL WILNER—AMA PR Institute, Chicago

FINANCES

The Board had before it in December of last year recommendations of the House Committee with respect to the purchase of the property at the corner of 17th and M Streets, N.W. or the disposition of its present property for the purpose of building elsewhere where parking would be more readily available. With the approval of the Board, the Committee employed Koones & Montgomery, Inc. to appraise the properties, which the firm valued at $525,000.00. After weighing the various factors, the Committee recommended to the Board that decision as to purchase of the southwest corner of 17th and M Streets, N.W. be held in abeyance. It concluded that nothing would be lost by holding the present property as it was increasing in value; furthermore, that the condition of the buildings was good and with some modernization would be more than ample to serve the needs of the membership for several years. The Board agreed with the Committee.

Expenditures of the Society are reviewed monthly by the Finance Committee of the Board, which submits a quarterly statement prepared by the Treasurer showing the income and expenditures as compared with the budget and the Society's assets and liabilities.

Financial records of the Society are audited by Wayne Kendrick and Co., Washington, D. C. The audit takes place immediately after the close of each calendar year. A condensed financial statement prepared by the auditors will appear in the February issue of the ANNALS.

CONCLUSION

As has been stated in previous years, the Chairman's annual report contains only the principal activities carried on under the direction of the Executive Board. Any Active or Life member desiring further details about items in this report or activities not included should get in touch with the Secretary, who will be glad to supply the information desired.

Ordinarily my term of office as Chairman of the Board would expire at the end of one year. However, seniority relations among the members of the Board were changed by the resignation of Dr. Ralph M. Caulk as a Board member on January 1, 1959, at which time he was elected Junior Delegate to the AMA. Dr. Milton M. Greenberg was elected to fill his unexpired term but under the specific requirements of the By-laws became junior to members already serving on the Board. The Constitution and By-laws provides that the senior member elected to a full term shall serve as Chairman, and in this capacity I shall continue during 1962.

I can assure you that I will carry on to the best of my ability. I have enjoyed the several years that I have been serving the Society as an officer, and I am happy to say that despite the length of my service, I maintain as keen an interest in Society affairs as ever.

Respectfully submitted,
JAMES W. WATTS, M.D.
Chairman, Executive Board

REPORT OF THE SECRETARY-TREASURER

Although succeeding years of Medical Society activity follow the same basic pattern, one can always count on changes in emphasis. Committees which are active one year are dormant in another. From the Secretary's standpoint this is fortunate because if all boards and committees were fully occupied he would be spread far too thin to do a creditable job.

This year the emphasis has been on methods of providing medical care, many of which have been controversial. Details in regard to this phase of the Society's activity are described in the Report of the Chairman of the Executive Board. Suffice it to state here that the Society is on record as opposed to legislation providing for medical care for individuals over 65 under Social Security. However, the urgent need for an adequate national voluntary health insurance program has been stressed and a Society-sponsored resolution introduced in the AMA House of Delegates in Washington last November called upon the Association to assert its leadership to this end.

Scientific Programs

The Annual Scientific Assembly, which would ordinarily have been held in 1960, was abandoned because the AMA's Clinical Meeting was held in Washington, November 28 to December 1. As the Secretary reported last year, the Committee on Arrangements, headed by Dr. Donald Stubbs, was so occupied with plans for this meeting that it would have been out of the question to hold the Assembly.

The AMA meeting also accounted in part for the abandonment of the Midwinter Seminar, which would ordinarily have been held in February 1961. It requires several months of diligent effort to develop a satisfactory program for the Seminar and there was not time in which to do it.

The Postgraduate Lectures in the Basic Sciences, sponsored by the Committee on Postgraduate Education, presented during October and November 1960, were highly successful, attendance exceeding the most optimistic expectations.

Plans are now under way for an expanded postgraduate program for physicians in practice. Details will be announced shortly after the 29th Annual Scientific Assembly has been held on November 27, 28 and 29, 1961.

Medical Annals

As pointed out a year ago, the Medical Annals, which had so long suffered from a dearth of scientific papers, now has a surplus. Dr. Wallace M. Yater, Editor of the Annals, is, of course, happy about this and has expressed the hope that more scientific material can be published. However, another development may make this impossible.

In common with medical journals throughout the country, both national and state, there has been a sharp reduction in the Medical Annals advertising revenue. In the light of this development the Executive Board has taken the position that any expansion of the contents of the Annals should be held in abeyance for the time being.

The Secretary of the Society, who is also Managing Editor of the Annals, is responsible in large part for the articles of a general nature and editorial matter which appear in the Society's journal. Their publication is, of course, subject to approval by the Editor. The same is true of the format, style and manner of presentation of the subject matter.

The future of the Annals will depend to a large extent on its revenue from advertising. In addition to its income from this source it is already subsidized from membership dues in the amount of $10,000 annually. As of June 30, 1961 the Annals was just breaking even financially.

Circulation of the Annals now stands at 2,950.

Medical Bureau

There is not much more to be said about the Bureau than has been stated repeatedly by the Secretary over the many years of its existence. The Bureau is undoubtedly the most valuable agency of the Society where public good will is concerned. Hundreds of physicians and thousands of Washingtonians are familiar with its efficient and essential service.

The Bureau will be 21 years old on December 1. During its existence it has operated day and night without an hour's interruption.

Although the BUREAU was established primarily to make physicians more readily available to their patients, it has from the beginning served the people of the District of Columbia as an information center about medical practitioners and the institutions in which they work. However, not all inquiries by any means are handled by the BUREAU. A large number are recieved daily in the Society's Executive Offices. Not a few of these are of such a nature they are turned over to the Secretary or the Assistant Secretary.

There are now 784 physicians subscribing to the BUREAU, of which 491 are Secretarial Service (private wire) subscribers and 293 are Alternate Listing Service subscribers.

An analysis of the calls handled in 1960 as compared to 1959 is as follows:

	1959	1960
Messages taken for physicians	239,671	249,208
Telephone calls required to reach physicians	195,112	219,462
Emergency calls (where patients have no physician)	3,946	3,850
Telephone calls required to reach physicians in emergencies	5,337	5,076
Instructional calls from physicians	167,744	173,131
Referrals (names of three physicians from the Society's list are given in rotation)	24,673	25,322
	636,483	676,049

MEMBERSHIP IN GROUP HOSPITALIZATION

On September 1, 1960, there were 1,227 doctors and members of their families participating in the Society's group enrolled in Group Hospitalization, Inc. Of these, 1,090 were enrolled under the Preferred Contract and 137 under the Standard Contract. As of September 1, 1961, the enrollment was 1,337, with 1,194 under the Preferred Contract and 143 under the Standard Contract.

Recent applicants elected to Active membership in the Society are given an opportunity to join the Society's group subscribing to Group Hospitalization if they do so within 60 days after their election.

Participants in the Society's group have in the past been billed a small amount for postage. This is being eliminated with the next billing. Incidentally, in addition to the postage, the services of a bookeeper for one month annually are required in connection with this activity.

MEMBERSHIP

The following figures show the membership totals at 5-year intervals since 1951:

	1951	1956	1961
Membership on September 1			
Active	1,303	1,429	1,485
Life	72	63	63
Affiliate	10	30	39
Associate	362	510	592
Honorary	18	27	27
Resident-Intern	12	28	27
Totals	1,777	2,087	2,233

Few medical societies have as large an Associate membership as ours. The explanation, in part, is the Society's geographical location. On the other hand, many retain this class of membership long after they have left for other parts of the country.

FINANCIAL RESPONSIBILITIES

The Secretary-Treasurer administers the Society's financial affairs under the direction of the Society's Finance Committee, a subcommittee of the Executive Board. Members of this Committee are the Chairman of the Executive Board, the President-elect, and the Secretary. The Committee reviews monthly expenditures with the Secretary-Treasurer.

Quarterly the Secretary-Treasurer submits to the Executive Board a report showing the Society's assets and liabilities and a comparison of the receipts and expenditures with the year's budget.

VARIOUS OTHER ACTIVITIES

In addition to meetings of the Society's boards and committees which he attends (he shares meetings of some committees with the Assistant Secretary, who acts for him) he participated in a number of "outside" groups. Among them were the Clinical Meeting of the American Medical Association in Washington, November 27 to December 1, 1960. . . the AMA's Department of Medical Service in Washington on January 8, 1961. . . the AMA's Legislative Conference in Chicago on March 18–19 . . . the AMA's Regional Conference on Insurance and Prepaid Medical Care in Washington on March 26–27 . . . the Annual Business Meeting of Blue Shield Plans held in Chicago on April 16–18 . . . the Annual Meeting of the AMA in New York, June 23–29.

Before this report is published he will have participated in the following meetings held in Chicago: the Annual Meeting of Medical Society Executives Association on August 30. . . the AMA Institute on August 31 and September 1 . . . the Annual Meeting of Blue Shield Plans on October 23 and 24 . . . the State Medical Journal Conference on October 30 and 31, where he will preside as Chairman.

The Secretary was Vice Chairman of the Inaugural Committee on Medical Care, of which Dr. J. Lawn Thompson was the very efficient Chairman. Although the Committee's services were rendered on the day President Kennedy was inaugurated, it held meetings prior to that time for the purpose of perfecting its plans . . . . He attended the White House Conference on Aging in Washington, January 9-12. . . . Although not a member of the committee planning the Health-USA Luncheon, he served on it in an advisory capacity. The Luncheon was held at the Mayflower Hotel on May 22 . . . . The Secretary continued as a member of the Board of Directors of the State Medical Journal Advertising Bureau. . . . He appeared on the orientation program of George Washington University School of Medicine for freshmen medical students on September 19.

CONCLUSION

The Secretary is well into his third decade as an officer with the Society. He has found it a challenging and stimulating experience. There have, of course, been difficulties as in any endeavor; nevertheless, overall he cannot think of any occupation which would have given him more satisfaction.

It has been a privilege for him to have taken an active part in meeting the problems confronting the medical profession in Washington and, to a lesser degree, the country. He deeply appreciates the confidence shown in him by officers, Board members, committees, and members of the Society. He is especially grateful for the loyalty and efficiency of those on his office staff, many of whom have been in the Society's employ for many years.

THEODORE WIPRUD
Secretary-Treasurer

REPORT OF THE BOARD OF CREDENTIALS

From September 1, 1960 to September 1, 1961, the Board of Credentials interviewed 45 applicants for Active membership, 16 for Associate, and 2 for Resident-Intern. All 63 applicants were recommended for election to the membership for a probationary year.

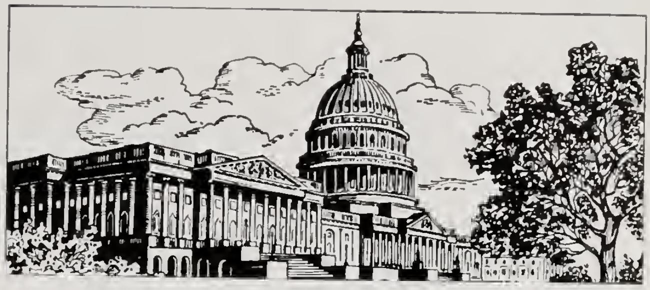
The Board of Credentials, which is an elected body, screens applicants for membership in the Society. All applications are submitted to the Board, which inquires into the standing of each applicant.

Applicants are announced by letter to all Active and Life members. Within 2 months from the date of the announcement the applicants are invited to appear before the Board of Credentials to be interviewed. After determining whether or not the individuals applying are qualified for membership, the Board submits its recommendations with respect to each applicant to the Executive Board.

In the course of its investigation the Board of Credentials communicates with medical societies to which the applicant has belonged and to hospitals where he has served on the medical staff to ascertain his professional standing. If he has served in the Armed Forces, a photostat of his medical record is required for the purpose of determining whether or not he has served honorably. In this manner the Board assures the Society that only physicians of unquestioned professional standing and good reputation generally are elected to membership. The applicants also have the opportunity to meet the members of the Board and the Secretary and to verify in person their data, which will be maintained in the Society's repository.

It is with deep regret that the Board reports the death of 11 members (see page 643).

Respectfully submitted,
PAUL R. WILNER, M.D., *Chairman*
EDWARD W. NICKLAS, M.D.
DUANE C. RICHTMEYER, M.D.



NEWS & PERSONALS

Meetings

The first **Davidson Lecture on Religion and Medicine,** with panel discussion, sponsored by the D. C. Medical Society's Liaison Committee with the Clergy, will be held, November 8, at 8:15 p.m. in the Medical Society's auditorium. Dr. Frank J. Sladen of Detroit, Michigan, will be the lecturer. The names of the panelists and other details concerning the meeting can be found in this issue of the Medical Annals, under In and Out of Focus, on pages 626 and 627.

The D. C. Division of the American Cancer Society will celebrate the fifteenth anniversary of its founding with a dinner at the Shoreham Hotel, November 14, at 7:00 p.m.

During the program the original founders will be honored. One of them, Dr. William P. Herbst, Jr., is this year's President. The others are: Dr. Roger M. Choisser, Mrs. J. Clifford Folger, George E. Hamilton, Jr., Samuel H. Kauffmann, Dr. Harry H. Kerr, Dr. Calvin T. Klopp, Frederick P. H. Siddons, and Eliot Wadsworth. The tenth founder, Dr. William Charles White, is deceased.

Further information and tickets can be obtained from the D. C. Cancer Society, telephone Executive 3-3690.

Members of the Medical Society of the District of Columbia will convene for their **Annual Business Meeting** in the Medical Society's auditorium, Wednesday, November 15, at 8 p.m. Reports to be submitted for approval appear in this issue of the Medical Annals. A supplementary report from the Executive Board will be read at the meeting. The Nominating Committee will make its report, following which there will be election of officers for 1962.

All Active and Life members are requested to attend this important meeting. Refreshments will be served following the session in the Library.

Children's Hospital of Washington is offering a **Postgraduate Course in Hypersensitivity and Pulmonary Function,** November 17, 18 and 19, to be presented by the Allergy Section of the Hospital's Research Foundation. The Course will be of special interest to physicians doing clinical allergy as well as pediatricians, internists and general practitioners.

The registration fee is $60.00. Enrollment forms may be secured from Dr. Richard H. Todd, Children's Hospital, 2125 13th Street, N.W., Washington 9, D. C.

General News

Doctor's House Call is a new health education radio series, sponsored by Peoples Drug Stores and broadcast daily over WTOP, Monday through Friday, at 12:10 p.m. The author and narrator is Dr. James Rogers Fox, a graduate of the University of Minnesota School of Medicine, who has had postgraduate training in internal medicine at the University and at the University of Edinburgh.

The series is endorsed by and produced in cooperation with the American Medical Association and the D. C. Medical Society. Each program is reviewed before being released for broadcast by the AMA's Physicians Advisory Committee for Radio and TV.

Georgetown University School of Medicine has announced the appointment of two new members to its faculty.

Dr. Abner Golden comes to Georgetown as Professor of Pathology. He is a graduate of Harvard Medical School, Class of 1942. He has been on the faculty of Emory University School of Medicine since 1948 and was named Professor of Pathology in 1955.

Dr. Henry D. Lederer, Associate Professor of Psychiatry, graduated from Rush Medical College in 1937. In 1946 he joined the faculty of the University of Cincinnati College of Medicine as Instructor in Psychiatry, becoming Associate Professor in 1952.

Both physicians are Board-certified in their fields and hold membership in many national scientific organizations.

Dr. Sanford L. Billet has been appointed Chief of the Alcoholic Rehabilitation Division of the D. C. Bureau of Mental Health. Dr. Billet is a graduate of the Cincinnati College of Medicine and served as resident in psychiatry for 3 years at the Cincinnati General Hospital. For the past 10 years he has served in the Medical Corps of the U. S. Air Force, and held the commission of Major.

The American Medical Association has announced two administrative staff promotions, effective August 14.

Mr. Leo E. Brown, formerly Director of Communications, is now Assistant to the Executive Vice President. Among his duties will be to assist officers and members of the Board of Trustees when they are speaking for or representing the AMA. He will represent the Executive Vice President at AMA council and committee meetings when necessary and will assist in the administrative duties of the office of the Executive Vice President.

Mr. Jim Reed, Director of Press Relations and Editor of *The AMA News*, has taken over as Director of the Communications Division. As such he will have jurisdiction over the AMA's public and professional relations program, publication of *Today's Health* magazine and *The AMA News*, and the AMA's exhibit, medical motion picture, and radio and television activities.

The Division of General Medical Sciences of the National Institutes of Health has awarded grants totaling $3,892,416 for establishment of 13 new **General Clinical Research Centers** in private research institutions. They bring to 32 the number of General Centers established since the program was initiated in the fall of 1959.

Grants are made by the Surgeon General of the Public Health Service on the recommendations of the National Advisory Health Council. Included among the recent grantees is **Georgetown University School of Medicine,** which will receive $300,000.00 for this project. The Research Center will be under the direction of Dr. Hugh H. Hussey, Dean of the School of Medicine.

Dr. James Watt, who has been director of the National Heart Institute since 1952, assumed new duties, September 11, as head of the Public Health Service's international activities. In this post he will direct the Service's Division of International Health; he will also be the Surgeon General's chief assistant and counsellor on international health affairs.

Dr. Ralph Knutti, who has served as associate director of the National Institute of Arthritis and Metabolic Diseases, will succeed Dr. Watt as director of the National Heart Institute.

Dr. W. Palmer Dearing, who retired from the Federal service on August 31 after serving as Director of Health Services for the U. S. Office of Civil and Defense Mobilization since 1957, has become the first Executive Director of Group Health Association of America. Dr. Dearing was Deputy Surgeon General of the Public Health Service from 1948 to 1957.

The American Diabetes Association has designated November 12–18 as **Diabetes Week.**

Physicians who would like to own a **new medical dictionary** may secure a copy of the **new edition of Stedman's** at a reduction of $2.00 from the list price by sending their old one to Project Hope. Williams & Wilkins Company, of Baltimore, publisher of Stedman's, has authorized book stores to accept used dictionaries for immediate trade-in for this purpose. Those who purchase the dictionary direct will receive a special reusable mailing carton with a book plate and mailing sticker to facilitate mailing the dictionary to Project Hope.

Personals

Dr. Arthur Egelman has been appointed Chief of the Northeast Mental Health Clinic of the D. C. Bureau of Mental Health. Dr. Egelman is a graduate of the University of Geneva School of Medicine. He served a 2-year residency in psychiatry at the U. S. Veterans Administration at Perry Point, Maryland, and an additional year at the Spring Grove State Hospital, Catonsville, Maryland. Prior to his present appointment he was staff psychiatrist in the Adult Mental Health Division of the Bureau of Mental Health.

Drs. George E. Schreiner, W. Proctor Harvey, Irving B. Brick, and Charles E. Rath, staff members of Georgetown University School of Medicine, have been promoted from Associate to full professorship in medicine.

Dr. Schreiner joined the faculty of the School of Medicine in 1951. In 1952 he became Director of the Renal Laboratories of the University Hospital and subsequently Director of the Renal and Electrolyte Division of the Department of Medicine. Dr. Harvey, a member of the faculty since 1950, is Director of the Division of Cardiology, Department of Medicine, and of the Training Program in Cardiology. Dr. Brick, a faculty member since 1957, is Director of the Division of Gastroenterology, and Dr. Rath is Director of the Division of Hematology, both of the Department of Medicine. Dr. Rath came to Georgetown in 1949.

Two faculty members in the Department of Medicine have been promoted from Assistant to Associate Professors. **Dr. Lawrence S. Lilienfield,** Associate Professor of Physiology, is Director of the Cardiovascular Research Laboratory. **Dr. Bruce I. Shnider,** Associate Professor of Medicine, is Assistant Dean of the School of Medicine and Coordinator of Education for the Georgetown Program at D. C. General Hospital.

Dr. Stanhope Bayne-Jones is credited with playing a major role in the preparation of Preventive Medicine in World War II, Volume V, recently published by the Army Medical Service. The volume, "Communicable Diseases Transmitted through Contact or by Unknown Means," is the sixteenth in the series, "History of the Medical Department, U. S. Army, in World War II."

Dr. Bayne-Jones, who retired from the Army as Brigadier General, is Chairman of the Advisory Editorial Board for the Preventive Medicine series of the medical history. He is currently consultant to the Surgeon General of the Army, and is a member of the Army Advisory Scientific Panel and of the National Advisory Cancer Council of the National Institutes of Health. During World War II he served in the Office of The Surgeon General as Deputy Chief of Preventive Medicine Service, as Administrator of the Army Epidemiological Board, and as Director of the USA Typhus Commission.

MRS. RAPEE'S NEW ASSIGNMENT

Mrs. Rapee

One of the most capable and active women in the Woman's Auxiliary to the American Medical Association is a Washingtonian, Mrs. Lawrence A. Rapee. During her incumbency as Chairman of the Auxiliary's Committee on Health Careers more than $500,000 was raised by the various state and county units of the organization throughout the country. The Woman's Auxiliary to the Medical Society of the District of Columbia alone raised $1,600 for nursing scholarships. This has been an important part of the District Auxiliary's program for a number of years and one which has been a real contribution to the health and well-being of the people of this and other communities.

At the National Auxiliary's recent meeting in New York in June, Mrs. Rapee was appointed Chairman of the Council on Legislative Activities. She and the Vice Chairman, Mrs. Robert Regan, are regular attendants at the sessions of the AMA's Legislative Committee. In this way they familiarize themselves at first hand with the Association's position with respect to the current national health legislation. Mrs. Rapee has also been a regular attendant at recent hearings held by the House Ways and Means Committee in Washington on the controversial Social Security legislation which would provide medical care for persons over 65. She is therefore in a position to keep the state and county auxiliaries throughout the country informed not only of developments on Capitol Hill but of the stand taken by the AMA in regard to all health bills. She has volunteered her coöperation with both the District Society and its Auxiliary.

Few women are better equipped for this assignment than Mrs. Rapee. One can be certain that she will make a splendid record.

Books Received

Acknowledgment is made of the following books which have recently been received. Selections will be made for more extensive reviews in the interest of our readers and as space permits. Physicians are urged to submit reviews of additional books which, in their opinion, merit comment.

Essential Hypertension—An International Symposium. Berne, June 7–10, 1960, sponsored by Ciba. Chairman, F. C. Reubi, Berne. Edited by K. D. Bock, Basle, and P. T. Cottier, Berne. Pp. 392, with 81 figures. Berlin: Springer-Verlag, 1960.

The Family Handbook of Home Nursing and Medical Care. I. J. Rossman, M.D., Ph.D., Chief of Professional Services, Home Care Department, Montefiore Hospital, New York, and Doris R. Schwartz, R.N., Assistant Professor in Outpatient Nursing, The Cornell University—New York Hospital School of Nursing, New York. Price (paper), $1.45. Pp. 519. Garden City, N. Y.: Doubleday, 1961.

Management of Obstetric Difficulties, 6th ed. Revised by J. Robert Willson, M.D., M.S., Professor of Obstetrics and Gynecology, Temple University School of Medicine; Head of the Department of Obstetrics and Gynecology, Temple University Medical Center. Price, $16.50. Pp. 687, with 323 text illustrations and 1 color plate. St. Louis: Mosby, 1961.

Obituaries

JOHN V. DOLAN, B.S., M.D.

(1903–1961)

Dr. John V. Dolan, general practitioner in Washington for more than 30 years, died August 16, 1961 at Suburban Hospital.

Dr. Dolan was born in New Milford, Conn., May 29, 1903, to Albert M. and Alice Roche Dolan. He attended New Milford High School and came to Washington for his premedical and medical education. He received a B.S. degree in medicine from Georgetown University and his M.D. degree from the same institution, the latter in 1926. He interned at St. Elizabeths Hospital, Youngstown, Ohio, and served a residency at Gallinger (now D. C. General) Hospital in 1927.

Dr. Dolan opened his offices for general practice at 3100 Connecticut Avenue, N.W. in 1928, and continued his practice in the same offices until his death.

During World War II, he served on the Selective Service Board.

He was elected to Active membership in the D. C. Medical Society in 1937. He was a member of the Georgetown Clinical Society and of the Holy Name Society of the Blessed Sacrament parish. His social clubs were the University and Army-Navy Country Clubs.

Dr. Dolan leaves his wife, the former Philomena

DECEASED MEMBERS OF THE MEDICAL SOCIETY

1960–1961

Bacon, Robert B.	(Active)	January 24, 1961
Cohen, Maynard I.	(Associate)	June 11, 1961
Daughton, Alva D.	(Active)	January 2, 1961
Dolan, John V.	(Active)	August 16, 1961
Hutchinson, Joseph R. B.	(Associate)	August 1, 1961
McCarthy, Joseph J., Sr.	(Life)	March 15, 1961
Minor, John	(Active)	April 16, 1961
Mitchell, James F.	(Life)	April 4, 1961
Mook, Wallace N.	(Associate)	April 13, 1961
Nachlas, Arthur	(Active)	February 12, 1961
Ong, Harry A.	(Life)	November 18, 1960

Vance, of the home address, 31 Oxford Street, Chevy Chase, Md., and three sons: Dr. John A. Dolan, an intern at Albany (N. Y.) General Hospital; Thomas E., at home; and James V. Dolan, of 4005 Davis Place, N.W. His parents, who live in Gaylordsville, Conn., survive him together with three brothers, Edward and James, also of Gaylordsville, and Paul Dolan, of Torrington, Conn.

Management of Genital Prolapse in Poor-risk Patient—Marchetti

(*Continued from page 571*)

judgment in the choice of procedure for any given case.

In this brief discussion on the conservative management of genital prolapse in the poor-risk patient, comment was made upon the inadequacy and unsatisfactory results with the use of the pessary. It is concluded that the safest procedure to correct genital prolapse in these particular patients is partial or complete colpocleisis depending upon whether the prolapse is uterine or vaginal.

In the moderately poor-risk patient the correction of genital prolapse is restricted to 2 procedures, namely, the Manchester operation and vaginal hysterectomy. It is realized that currently vaginal hysterectomy is chosen more frequently, but in properly selected cases the Manchester operation may have some advantages. These procedures have more risks associated with them than partial or complete colpocleisis, but unlike the more conservative operations it leaves the patient with a functioning vagina.

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Vaginal Cytology—Pearson, Lady and Platt

(*Continued from page 581*)

all adult women, death from cancer of the uterus may be largely prevented. To achieve this objective, the medical profession has a two-fold responsibility: first, there must be a wider acceptance of the cytologic method; second, all physicians must participate in educating the public to seek periodic health examinations.

1834 K Street, N.W.
Washington 6, D.C.
(Dr. Pearson)

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Diagnosis and Management of Vulvar Lesions—Parks

(*Continued from page 585*)

pletely and deeply excised from the pubic periosteum to the rectal sphincter. A few points in surgical technic include:

1. Preliminary incision to the deep fascial planes of cleavage
2. Digital separation and elevation of areolar tissue
3. Cutting of the skin and superficial fascia at right angles, with the fingers elevating and compressing vessels
4. Drainage of the iliofemoral areas, pressure bandages, and ice-pack dressings applied in the immediate postoperative period to prevent initial edema and thereby reduce pain
5. Replacement of blood loss by transfusion; maintenance of serum protein balance
6. Antibiotics as indicated.

If malignancy of the vulva is to be controlled, all small tumors of the vulva must be removed, irrespective of the patient's age, and all ulcerative lesions which fail to respond immediately to medical treatment must be subjected to biopsy. The woman who has had a cancer of the vulva removed should be observed carefully thereafter. She has twice the chance of having another cancer.

Fractional Radioiodine Uptake Test—Bernstein et al

(*Continued from page 591*)

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Telephone Listings—Observer

(*Continued from page 629*)

advertisement which appears in the classified section of the Washington Telephone Directory.

The Committee on Medical Ethics and Professional Conduct, at its meeting on May 12, 1961, agreed with the Virginia Council that bold-faced type listings were objectionable and recommended to the Executive Board that listing of individual physicians in both classified and alphabetical telephone directories in bold-faced type be opposed. Included were clinics and medical buildings.

The Board approved, and the Chesapeake and Potomac Telephone Company has been informed to this effect. However, it supported the Classification Committee's opposition to specialty listings; thus previous actions in this matter which it had consistently endorsed still stand.

T. W.

MEDICAL SOCIETIES WITH LIMITED MEMBERSHIP

Washington, D.C.

1961–1962

Society	President	Secretary	No. Meetings	Date of Meetings	Place of Meeting
Academy of Medicine of Washington, D.C.	J. H. Roe	A. M. Griffin	3	On call	
American Academy of General Practice, D.C. Chapter	E. Aschenbach	R. Tilley	4	3rd Tuesday, Nov., Feb., Mar., Apr.	MSDC Building
American Federation for Clinical Research, D.C. Chapter	L. Berman	H. W. Schnaper	5	On call	MSDC Building
American Medical Writers' Association, Mid-Atlantic Chapter	R. J. Benford	E. Trowbridge	3	On call	
Clinical Club of Washington	O. Englehart	R. G. Klepser	8	1st Tuesday	Kennedy-Warren
Clinico-Pathological	J. Washington	R. B. Nelson, Jr.	8	Monthly	Homes
D.C. Society of Anesthesiologists	J. Esau	E. N. Chapman	4	Oct., Dec., Feb., Apr.	MSDC Building and Kennedy-Warren
Georgetown Clinical	J. S. Stanton	E. P. Madigan	7	3rd Wednesday	Broadmoor Hotel
George Washington University Alumni Association	A. Brigulio	T. M. Peery	4	3rd Wednesday, Sept., Dec., Feb., April	
Hippocrates-Galen	R. Whitley	H. H. Hawfield	6	1st Thursday, Oct., Nov., Dec., Feb., Mar., Apr.	Kennedy-Warren
International Medical Club	A. A. Morris	R. V. Choisser	3–4	On call	Mayflower Hotel
Jacobi	H. Sterling	S. Zukerman	6	3rd Monday	Willard Hotel
Jefferson Medical College Alumni Association	S. L. Rollins, Jr.	W. R. Stecher	2	Spring and Fall	Army-Navy Club
Kober	J. R. Cavanagh	J. W. Pearson, Jr.	8	3rd Monday	Army-Navy Club
Louis Mackall	R. M. Roll	F. Schumacher	7	3rd Thursday	Kennedy-Warren
Medical Arts Society of Greater Washington	V. V. Wilcox II	H. P. Laughlin	7	2nd Thursday	Kennedy-Warren
Metropolitan Health Officers Association	D. L. Finucane	M. Grant	4	Mar., June, Sept., Dec.	Prince Georges Country Club
Northern Virginia Academy of Surgery	C. Amole	F. Williams	4	On call	
Osler	C. W. Sprunt	G. Buchanan	8	3rd Monday	Homes
Pan American Medical Society of D.C.	B. Nunez	C. Klopp	6	Bi-monthly	
Providence Hospital Doctors Alumni Association	D. R. Lenarduzzi	T. F. O'Donovan	18–20	On call	Providence Hospital
Rheumatism	R. Scalettar	W. R. Felts	6–8	On call	
Saint Elizabeths	M. A. Woodbury	L. D. Robinson	3	Fall, winter, spring	St. Elizabeths Hospital and MSDC Building
Society of Internal Medicine	F. S. Bacon	W. D. Brill	2	On call	MSDC Building
Trudeau Society	M. Gusack	W. J. Washington, Jr.	4–5	On call	D.C. Tuberculosis Association

MEDICAL SOCIETIES WITH LIMITED MEMBERSHIP—Continued

Society	President	Secretary	No. Meetings	Date of Meetings	Place of Meeting
Washington Academy of Neurosurgery	J. P. Murphy	A. P. Hustead	4	Last Wednesday, Sept., Nov., Feb., Apr.	Kenwood Country Club
Washington Academy of Surgery	G. W. Ault	B. G. Brown	5	Oct. 9, Dec. 11, Feb. 12, Apr. 9, May 14	Kennedy-Warren
Washington, D.C. Dermatological	M. P. Landman	P. N. Horvath	6	4th Thursday, except Dec., Mar.	
Washington Gynecological	D. H. Kushner	J. W. Pearson, Jr.	5	Oct. 26, Dec. 6, Jan. 31, Mar. 28, May	Columbia Country Club and Willard Hotel
Washington Homeopathic	W. P. Baker	H. H. Custis	2	May, Oct.	Columbia Country Club
Washington Medical and Surgical	P. P. Andrews	R. R. Cross	8	4th Monday	Army-Navy Club
Washington Orthopedic Club	P. Kenmore	R. Dow	8	1st Monday	MSDC Building
Washington Psychiatric	H. Varney	L. Yochelson	8	4th Friday	MSDC Building
Washington Psychoanalytic	D. S. Jaffe	D. L. Burnham	8	2nd Friday	1720 M Street, N.W.
Washington Society of Pathologists	F. Johnson	L. B. Thomas	10	On call	Armed Forces Institute of Pathology
Washington Urological	L. Bachrach	G. R. Gable	6	On call	Doctors Hospital
Women's Medical	L. I. Platt	G. G. Cochran	8	1st Tuesday	

NOTE: Most of these societies begin their meetings in October and continue through April or May.

SECTIONS OF THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

1961–1962

Section	Chairman	Secretary	No. Meetings	Date of Meetings	Place of Meeting
Allergy	W. A. Howard	A. M. Connor	6	On call	
Anesthesiology	J. Esau	E. N. Chapman	4	Oct., Dec., Feb., Apr.	MSDC Building and Kennedy-Warren
Dermatology and Syphilology	M. A. Weiner	J. Q. Gant, Jr.	8	Monthly	MSDC Building
Gastroenterology	E. S. Witowski, Jr.	E. C. Wilson, Jr.	4	1st Tuesday, Oct., Dec., Feb., Apr.	Kennedy-Warren
General Practice	S. Diener	C. P. Ryland	4	Oct., Jan., Feb., Apr.	MSDC Building
Internal Medicine and Allied Subspecialties	A. Brigulio	W. D. Brill	2	Nov. 14 and Spring 1962	MSDC Building
Neurology, Neurosurgery, and Psychiatry	D. S. O'Doherty	N. H. Horwitz	3	On call	MSDC Building
Ophthalmology	P. E. Zehfuss	C. W. Sprunt	4	Oct. 3, Dec. 12, Feb. 6, Apr. 24	Kennedy-Warren
Otolaryngology	A. J. Delaney	J. M. Daly	4	2nd Tuesday, Nov., Jan., Mar., May	Army-Navy Club
Pathology and Laboratory Medicine	J. B. Morales	W. G. Battaile	9	Last week of month	MSDC Building and Homes
Pediatrics	H. M. Hobart	S. L. Leiken	1	May	Children's Hospital
Physical Medicine and Rehabilitation	D. M. Freid	G. Reynolds	7	1st Thursday	N.I.H.
Plastic Surgery	W. C. Meloy	A. J. Suraci	6	2nd Monday, alternating months	
Radiology	J. S. Hashim	W. E. Sheely	4	3rd Wednesday, Oct., Jan., Mar., May	MSDC Building

MEDICAL ANNALS
of the District of Columbia

November 1961 VOLUME XXX • NUMBER 11

WALTER REED ARMY MEDICAL CENTER NUMBER

This is the third of a second series of special numbers of the Medical Annals, the scientific material for which is supplied by medical institutions and scientific organizations in the Washington Metropolitan Area. For the Walter Reed Army Medical Center Number, the Editorial Board is indebted to Colonel Conn L. Milburn, Jr., M.C., U.S.A., Consulting Editor of the Medical Annals, who secured the papers which appear in this issue. Due to limited space all of the excellent papers could not be published but some of them will appear in subsequent issues during the year.

The Walter Reed Army Institute of Research

COLONEL CONN L. MILBURN, JR., M.C., U.S.A.
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In a previous special Walter Reed Army Medical Center issue of April 1959, Medical Annals gave primary emphasis to the Walter Reed General Hospital. In this issue we feature the Walter Reed Army Institute of Research, another of the main components of the Walter Reed Army Medical Center.

The Walter Reed Army Institute of Research, in its 69th year, is located in northwest Washington, D. C., at the Walter Reed Army Medical Center. Under the overall direction of the Army Surgeon General, Lieutenant General Leonard D. Heaton, the Institute is logistically supported by the Center, which is commanded by Major General Clinton S. Lyter. As the largest Army medical research facility of the 12 Army research units, it is under the command control and supervision of the Army Medical Research and Development Command, Office of The Surgeon General, Department of the Army, headed by Brigadier General James H. Forsee.

History

INAUGURATION AND EARLY HISTORY

The Walter Reed Army Institute of Research (WRAIR) was founded in 1893 as the Army Medical School, the first school of preventive medicine in the United States. The school was established by Surgeon General George M. Sternberg, one of the great military men of science, thus bringing to fruition an idea first proposed by Surgeon General William A. Hammond in 1862. On General Sternberg's recommendation the War Department issued General Orders No. 51, dated 24 June 1893, founding the

School. The first class began on 1 November 1893 with 5 students officially enrolled. From this small beginning the original Army Medical School has grown into the present great Institute of Research whose activities cover all parts of the world.

General Sternberg had 2 principal objectives in establishing the Army Medical School: first, to provide a better background in basic sciences and to orient every entrant into the Medical Corps in the field of military medicine; and second, to provide a center of original research and investigation that would help to solve the Army Medical Service's professional problems where existing knowledge was deficient. On this basic framework WRAIR is still building.

BRIG. GENERAL GEORGE M. STERNBERG

Surgeon General of the Army, founder of the Army Medical School, forerunner of the Walter Reed Army Institute of Research.

The School was originally housed in 2 rooms of the Army Medical Museum's old building at Seventh and B Streets, S.W. By a curious coincidence, the Armed Forces Institute of Pathology, present-day successor to the Army Medical Museum, is now housed in a large modern building on the Walter Reed Army Medical Center grounds next door to WRAIR.

The original course, as established by the War Department's General Orders No. 78, dated 22 September 1893, was for 4 months and included lectures on and practical instruction in:

"1. The duties of medical officers in war and peace.

2. Military surgery, the care of the wounded in time of war, and hospital administration.

3. Military hygiene.

4. Military medicine.

5. Microscopy, sanitary and clinical, pathological histology, bacteriology, and urinology.

6. Hospital Corps drill, and first aid to the wounded."

Captain (later Major) Walter Reed, in whose honor the Army Medical Center is named, was a member of the first faculty. Captain Reed was Professor of Clinical and Sanitary Microscopy and Director of the Pathological Laboratory. He was also the first Secretary of the Faculty.

After its establishment in 1893 the School soon began to grow and to expand its activities, a process which has continued ever since. Except for the academic year of 1894–95, when no students were assigned to the class, and the period of the Spanish-American War when classes were suspended, courses have been presented each year since the beginning. In the very early years the course was lengthened to 5 months and a few years later it was lengthened to 8 months with a broadened curriculum.

When classes were resumed in 1901 after the Spanish-American War, the growing School rapidly became recognized as a postgraduate training center, research institution, and consultation and reference center of significance not only to the Army but to the whole field of public health in general. As a central reference laboratory for definitive diagnosis of human and animal diseases, personnel of the School were frequently called upon to make field investigations and act as consultants to The Surgeon General and Army Area surgeons.

CAPTAIN (LATER MAJOR) WALTER REED

Secretary, Professor of Clinical and Sanitary Microscopy and Director of the Pathological Laboratory.

Only a few of the outstanding achievements of this early period can be mentioned here. Major Walter Reed's original research on yellow fever is, of course, world-famous. It is probably not so generally known that the Army Medical School, forerunner of WRAIR, made other medical contributions of comparable significance during these early years. In 1902 the School was the first to teach the use of the X-ray in military medicine. Staff members Dr. James Carroll and Colonel Edward B. Vedder made the first immunization study with oral vaccine in 1904. Preparation of typhoid vaccine and biologic products control for use in the Army and other Government services were started at the School in 1908. In 1909 the typhoid vaccine prepared at the School was administered to 830 volunteers. In 1910 Major Carl R. Darnall, of the School faculty, developed a mechanical liquid chlorine water purifier now in world-wide use.

As the School grew, its original quarters in the Army Medical Museum became more and more overcrowded, and it finally moved in 1910 to a new 6-story building at 721 13th Street, N.W., where it occupied the 5 upper floors. It remained in this building until 1916, when it moved to a building at 604 Louisiana Avenue near the District Courthouse.

WORLD WAR I TO WORLD WAR II

The School assumed many duties during World War I. Additional space was secured in an adjoining building to accommodate new classes in various specialties. Large groups of enlisted men were given instruction on special topics, such as how to use the Thomas splint. An orthopedic training, research and servicing center was established and intensive research expanded in the fields of communicable disease prevention and control, immunology, and biologic products manufacturing.

During the period 1916–1919, respiratory diseases, including influenza, caused great losses of military manpower, and the staff of the School was actively engaged in studies aimed at their prevention and control. One of the outstanding pieces of rearch work of this period conducted by faculty members was the work done by Major Russell C. Cecil and Captain Francis B. Blake on experimental pueumococcus pneumonia in monkeys, for which they developed prophylactic vaccination and specific treatment.

The School played a major role in the creation, training, and standardization of the Army's medical laboratory service and the development of X-rays as a clinical tool.

During and after World War I, as the School continued to grow and to expand its activities, the desirability of being associated with and located near a major hospital became increasingly apparent. It was suggested that the School should be located in the vicinity of, and closely affiliated with, the recently established Walter Reed Hospital. This goal was finally realized in 1923. In that year, largely as a result of the fund-raising efforts of Major General Merritte W. Ireland, the south wing of the present WRAIR building was completed. The School was at last established in a home of its own in a handsome building adjacent to Walter Reed Hospital. Between the years of 1923 and 1932 the central and north wings of the WRAIR building were built.

With the establishment in 1923 of the Army Medical Center in Washington, D. C., 3 professional schools from different locations were centralized there: The Army Medical School, moved from quarters at 604 Louisiana Avenue in Washington, D. C.; the Army Veterinary School, originally opened in Chicago in June 1920 as the School of Military Meat and Dairy Hygiene and Forage Inspection; and the Army Dental School, founded in 1922 as a component of Walter Reed Hospital. The 3 schools were placed under 1 commandant and named "The Medical Department Professional Service Schools." Since that time there has been a close relationship among the departments of the 3 schools.

The advantages of having the School located adjacent to the Hospital, and being closely affiliated with it, are obvious. New technics developed in the School's laboratories can be evaluated under clinical conditions and, when proved workable, can be quickly utilized for the care of patients. A few examples of the close coöperation between the School and the Hospital are given later in this historical sketch.

Courses were continued in the years between World Wars I and II, including the basic courses and the advanced courses for training in specialties only. Among the notable contributions to medical science made by members of the School staff during this period were the following:

In 1922 Major Fernando E. Rodriguez published fundamental work on the bacteriology of dental caries. In 1927 Lieutenant Colonel Charles F. Craig developed complement-fixation tests for amebiasis. In 1928 Major Raymond A. Kelser developed rinderpest vaccine and chloroform-treated vaccine for single-injection rabies immunization of dogs. In 1942 original research in the Dental School resulted in the development of the acrylic eye.

WORLD WAR II TO PRESENT

With mobilization of the Army it became apparent that the teaching program of the Medical Department Professional Service Schools would have to be revised to give the hundreds of new medical officers indoctrination in military medical practice and introduction to military problems anticipated in foreign areas in the event of war. These preparations culminated in July 1941 in the initial presentation of the course in tropical medicine.

The Army Medical School marked its fiftieth anniversary on 18 December 1943 with graduation exercises for the class completing courses in military and tropical medicine. The class of 124 included medical officers from the armies of the United States, Canada, and Peru, and officials of state health departments. An honored guest at the exercises was Colonel Deane C. Howard, retired, who held the highest rating in the first class graduated from the Army Medical School in 1894.

The School continued its educational program for officers during the whole period of World War II, as well as providing, in the realm of research, the solution to many of the problems arising during the conflict.

In addition to the School's communicable disease program in research and education, the changing patterns of conflict on a world-wide basis were underlining the need for development of methods of dealing with mental and physical trauma, the need for a realistic medical appraisal of the standards employed in job assignment and personnel selection, and the need for methods of meeting the threat of total war involving civilian populations as well as combat forces. There was also a growing realization of the need for integrating the results of the expanded defense research program that could reach every member of the health professions, civilian as well as military.

Since World War II the School has changed its name several times. The name, Army Medical Department Research and Graduate School, was adopted in 1947. This was changed to The Army Medical Service Graduate School in 1950 and finally, in 1955, the present name, The Walter Reed Army Institute of Research, was adopted.

As WRAIR has continued to grow and to branch out into new fields since World War II, the noteworthy contributions of its staff have increased in proportion. This article can do no more than touch on a few highlights.

In 1949 Dr. Joseph E. Smadel and associates developed the chloramphenicol treatment of scrub typhus and typhoid fever.

During the Korean conflict the School made many contributions of great importance. A surgical research team made significant improvements in vascular surgical methods, in the treatment of shock in battle casualties, and in the treatment of post-traumatic renal insufficiency with the artificial kidney. The results of this team's work were published in 4 volumes under the series title of "Battle Casualties in Korea: Studies of the Surgical Research Team."

In 1952 Dr. David McK. Rioch and associates initiated psychiatric research in the combat area of Korea. This was followed by a substantial reduction in manpower losses from psychiatric causes.

In 1957 Dr. Maurice R. Hilleman and his associates requested and obtained throat washings from the victims of an influenza epidemic in Hong Kong. Within 5 days they succeeded in isolating and identifying a new influenza virus type against which no antibodies were present in the body. As a result, a vaccine was prepared in time to minimize the effects of the Asian influenza epidemic in this country.

In 1957 also, Lt. Colonel William H. Crosby and Heinz W. Kugler developed an intestinal biopsy capsule (now known as the Crosby biopsy capsule), an instrument for obtaining intraluminal biopsies of the intestinal mucosa. The instrument, originally constructed in the WRAIR Instrumentation Division, consists of a capsule containing a rotating knife which is spring-activated and triggered by suction. The suction first draws a bit of mucosa into the capsule before the knife is sprung. A 2 mm. polyethylene tube holds the capsule captive and also serves to transmit suction and to retrieve the capsule. The method has proved safe and reliable, with the added advantage that it is technically uncomplicated and imposes a minimum of hardship on the subject.

In 1961 the WRAIR Research Films Section was authorized by the Office of The Surgeon General to produce all Professional Medical Films needed for the Resident and Intern Training Program throughout the U. S. Army. The section's most famous research documentary film is on the mouth-to-mouth method of rescue breathing, which has won 2 international awards. As a result of this film the mouth-to-mouth method is now being taught by all branches of the Armed Forces and has been officially adopted by the American Red Cross and by police and fire departments throughout the country.

Present Activities

MISSION

The basic mission of the Walter Reed Army Institute of Research is "To provide the medical research and professional graduate training required by the Army to fulfill its role in the national defense." Actually, this broad mission is divided into 4 parts: (1) serving as a research and development center, (2) providing education and training to officers of the Army Medical Service (also to some officers from other branches of the Armed Forces and from other countries and some civilians), (3) serving as a central reference laboratory for the Army Medical Service and, in a number of fields, for the Navy, Air Force and Veterans Administration, and (4) manufacturing more than 100 biological products, not obtainable through commercial sources, which are supplied to all the Armed Forces and the Veterans Administration.

ORGANIZATION

The Walter Reed Army Institute of Research is endowed with an outstanding staff of scientists and administrators, both military and civilian. A Scientific Advisory Board, composed of nationally known leaders in the medical and allied professions, meets regularly with the heads of the WRAIR staff to discuss new problems and to work out possible solutions.

WRAIR is currently divided into the following major professional divisions: Basic Surgical Research, Biochemistry, Clinical Surgery, Communicable Disease and Immunology, Dentistry, Medicine, Neuropsychiatry, Nuclear Medicine, Preventive Medicine, and Veterinary Medicine. In addition to these divisions the following professional departments are organized as Special Activities: Department of Atomic Casualties Studies, Department of Experimental Pathology, Department of Microbiology, and Department of Nursing. The Office of the Secretary, the Division of Instrumentation, and the Division of Supply and Service perform a wide variety of service functions for the whole Institute. The Division of Instrumentation designs and manufactures special instruments needed for some of the research work conducted at WRAIR and not commercially available.

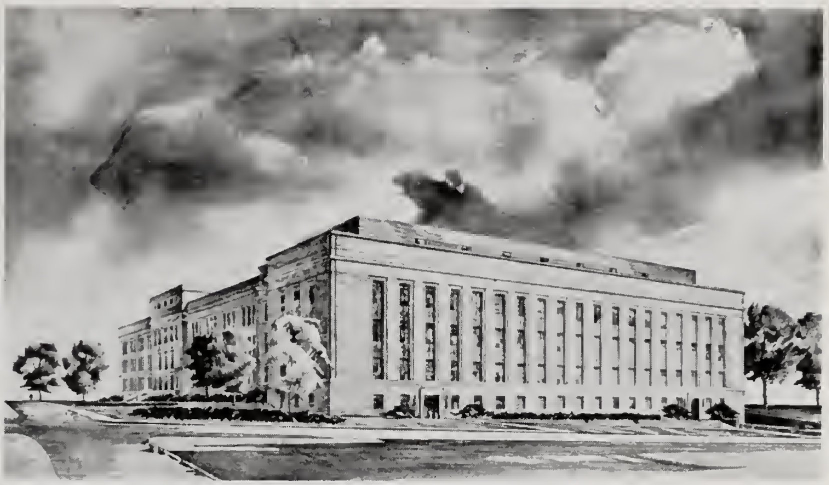
POSTGRADUATE EDUCATION

The education and research program now carried out is extremely broad. The training schedule for fiscal year 1962, for example, lists 28 different courses. These range from short refresher courses and symposia lasting a few days to 2 courses which run for the full academic year of 9½ months. These long courses are the Military Medicine and Allied Sciences Course and the Military Nursing Practice and Research Course. The former is the successor to the original basic sciences course which has been given in one form or another ever since the School was founded. Many graduates of this course and its predecessors have gone on to achieve careers of great distinction in the Army Medical Service. The Military Nursing Practice and Research Course is being offered for the first time. In fact, it is the first time that such a course has been given in the military. It is being added to WRAIR's educational program in recognition of the increasing importance of nursing research and the contribution it can make to military medicine.

Space does not permit the naming of all the WRAIR courses and symposia. Some idea of their scope is indicated, however, by listing just a few names: Dentistry Advanced, Medico-Military Application Course for Nuclear Medical Officer, Veterinary Aspects of Nuclear Medicine, Fundamentals of Medical Support in Future Warfare, Current Trends in Medical Laboratory Activities, Medical Management of Mass Casualties, Social and Preventive Psychiatry, Current Trends in Hospital Administration, Global Medicine, Symposium on Current Surgical Practices.

MEDICAL RESEARCH

WRAIR's research program is perhaps even more diversified than the educational program. The Institute is the largest of 12 medical research laboratories of the Army and has by far the most diversified program. Approximately 100 individual research problems are under study at all times. Research projects deal with practically all recognized specialties in medicine, surgery, dentistry, veterinary medicine, nursing, and all the allied biological sciences.



WALTER REED ARMY INSTITUTE OF RESEARCH

Architect's sketch of the building, showing the new west wing now (autumn, 1961) nearing completion.

In addition to the research work performed in its own buildings, WRAIR coöperates closely with various overseas research laboratories and sends out research teams all over the world to study particular medical problems as they arise. It gives technical support to the U. S. Army Tropical Research Medical Laboratory in San Juan, Puerto Rico, and the U. S. Army–SEATO Medical Research Laboratory in Bangkok, Thailand. Under the terms of directives from the U. S. Army Medical Research and Development Command, WRAIR is to "provide technical supervision" for research conducted by U. S. Army Medical Research Units in Malaya, Europe and Panama; and the Director is delegated responsibility for "coördination and technical supervision" of research in infectious and parasitic diseases performed in other Research and Development Command units.

Mention has been made of the close coöperation between WRAIR and the Walter Reed General Hospital. This operates in many ways. For example, the Department of Metabolism, part of the WRAIR Division of Medicine, is located on a hospital ward. This unit has done outstanding work in the study and treatment of metabolic diseases, particularly in the development of the artificial kidney for the treatment of renal disorders.

The Department of Psychiatry, part of the WRAIR Division of Neuropsychiatry, maintains a special psychiatric ward for the treatment of schizophrenic patients. Here the latest technics of milieu therapy have been applied with notable success.

Numerous other examples of this coöperation could be given, but 2 must suffice. The Director of the WRAIR Division of Medicine and Chief of the Department of Hematology within that Division, Colonel William H. Crosby, M.C., is also Chief of the Hematology Service, WRGH. Thus, close collaboration between the 2 units is assured. Plans are now under way to establish a new department of the WRAIR Division of Clinical Surgery, tentatively called the Department of Clinical Surgical Investigation, on one of the surgical wards of the Hospital. The advantages of such dovetailing of work between the Institute and the Hospital are obvious.

NEW FACILITIES

As WRAIR's work has expanded in recent years, every effort has been made to have the physical facilities keep pace. Some of the equipment here has only a few counterparts anywhere in the world, notably the Whole Body Counting Facility for measuring low-level radioactivity in man and the highly specialized equipment in the Germfree Research Laboratory. Nevertheless, space has been at a premium even though new laboratories have been built in the Forest Glen, Maryland section of the Walter Reed Army Medical Center.

(*Continued on page 707*)

Natural Portosystemic Venous Shunts in Portal Hypertension

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ABNORMAL BLOOD FLOW (shunting) from portal to systemic veins has long been recognized as a concomitant of portal hypertension. The channels which have attracted the most attention are those around the lower esophagus and upper stomach, since hemorrhage from the varices formed by these collaterals is an important complication of portal hypertension. Many other connections between the 2 systems exist, which, by the use of rapid serial filming in splenoportography, are being demonstrated in the living patient with various clinical problems. The radiologist, internist and surgeon should be aware of the potential channels of collateral circulation between the 2 systems of veins and should be able to identify at least the larger channels in the films (figures 1–8). The presence of collaterals signifies portal hypertension, and by their location in the system they may point to a cause of the hypertension. The surgeon will wish to avoid and preserve them at operation.

The larger channels, 10 mm. and over in diameter, are of particular interest. These collaterals approach the size of the shunts produced by portocaval and splenorenal anastomoses made for the relief of portal hypertension and its complications, especially bleeding from esophageal varices. One might hope that cases showing large natural shunts would also show reduction of pressure and lessened tendency to bleed, thereby affecting indications for surgery.

Collateral blood flow, or portosystemic shunting, occurs through 2 broad categories of channels (table 1). The first of these is reverse flow through normal tributaries of the splenic and portal veins which connect with systemic veins. The most frequently seen route is that of the coronary and short gastric veins which transmit blood to the superior vena cava via the esophageal and para-esophageal veins into the hemiazygous and azygous system.[2] Another route in this category is backflow into the inferior mesenteric vein to

TABLE 1

Portosystemic Venous Collateral Channels

A. Reverse flow in normal channels
    1. Gastroesophageal
    2. Inferior mesenteric
    3. Superior mesenteric
B. Newly developed, recanalized, or enlarged abnormal channels
    1. Splenocaval
        a. To superior vena cava
        b. To inferior vena cava
        c. To atria and pleuropericardial plexus
    2. Portocaval
        a. To coronary and gastroesophageal system
        b. To umbilical vein with connections to both cavae
        c. To coronary sinus and right atrium
        d. To retroperitoneal plexus

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the colic-hemorrhoidal veins and pelvic plexus, which drain into the inferior vena cava via the hypogastrics and common iliacs.[2] Connections to the inferior vena cava from the superior mesenteric vein via the veins of Retzius are theoretically possible,[3] but were not observed in our series.

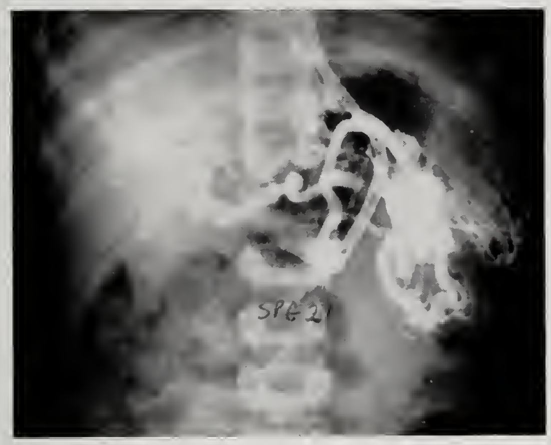

FIG. 1. Case 1, table 3. Note plexus draining into intercostal-hemiazygous system, gastric varices, and large natural splenorenal shunt. The contrast medium is seen streaming across the midline and fading away due to admixture of unopacified blood in the inferior vena cava. The gastric tube is fortuitously superimposed over the renal vein. (From Sullivan, Hamilton and Gamble.[1] Used by permission of Paul B. Hoeber, Inc., publishers.)

The second large category of channels is that of enlarged or recanalized channels which do not normally carry an appreciable quantity of blood. One source of these is the vein residual from embryologic development. Patency of the umbilical vein in adults, running from the umbilicus to the left branch of the portal vein in the liver via the round ligament, was reported nearly 40 years ago. This vein has recently been used in a number of patients as an approach for opacifying the portal system for radiography.[4] A review of the embryology of the portal and umbilical veins[2, 5] shows the richness of these potential channels which connect the portal vein with the para-umbilical, epigastric, and internal mammary veins in the anterior abdominal wall. They also form direct channels from the portal vein to the coronary sinus and the atria of the heart and penetrate the diaphragm to connect the pulmonary veins with the portal system. These have been shown to be patent in patients with cirrhosis and portal hypertension.[6, 7, 8] Another source of these abnormal channels lies in the development of new pathways through enlargement of capillary vessels or through the growth of entirely new vessels in fibrous adhesions about the spleen or liver. It is interesting to speculate on the cause and mechanism of this new growth and recanalization of latent embryologic channels, but this is another subject and cannot divert us here. These veins connect the splenic drainage with the superior vena cava by channels across the abdominal wall to intercostal, retroperitoneal, and lumbar

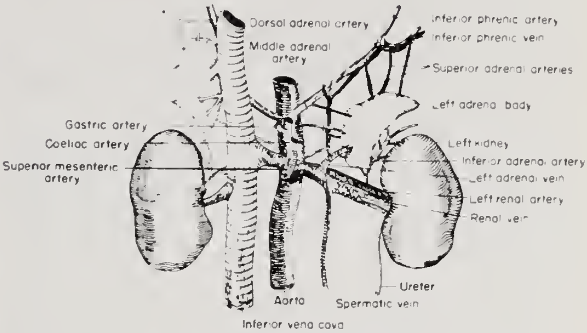
Dorsal adrenal artery
Middle adrenal artery
Inferior phrenic artery
Inferior phrenic vein
Superior adrenal arteries
Left adrenal body
Gastric artery
Coeliac artery
Superior mesenteric artery
Left kidney
Inferior adrenal artery
Left adrenal vein
Left renal artery
Renal vein
Ureter
Aorta
Spermatic vein
Inferior vena cava

FIG. 2. Diagram in detail of connections between phrenic, adrenal, and renal venous drainage. This pathway is a likely one in formation of natural splenorenal shunt. (Compare figures 1 and 3.) The spleen establishes venous connection with diaphragm through fibrous or granulomatous adhesions. (From Quiring.[2] Used by permission of the publishers.)

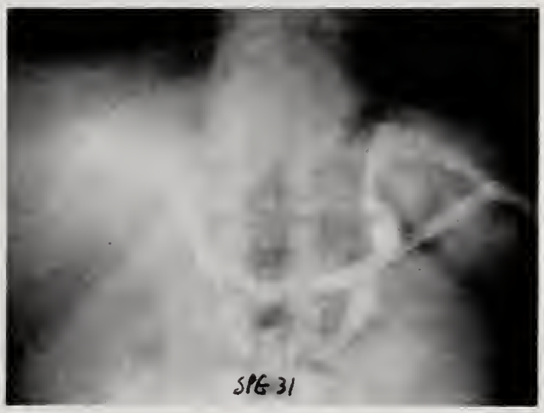

FIG. 3. Case 5, table 3. Large natural shunt, probably splenorenal, measuring 1.3 cm. in diameter on film.

veins which drain into the azygous system. Also, direct connection from the spleen to the left renal vein may develop. Devious channels may connect the spleen with diaphragmatic drainage, the blood then arriving in the renal vein via the adrenal vein (figure 2). Others connect splenic drainage to retroperitoneal and colic-hemorrhoidal systems which are tributaries through the pelvis to the inferior vena cava. An exotic collateral is that from the spleen across the diaphragm via the pulmonary veins to the left atrium, or via the pleuropericardial plexus to the right atrium. Other channels may form from the liver or portal vein to the abdominal wall or retroperitoneal plexus. The channels are documented by the detailed and well illustrated studies of Doehner et al[6] with radiography of barium injections in postmortem specimens. Many of them are shown in the splenoportograms made during life and reproduced by these and other authors.[3, 6-9] Table 1 offers a classification of these collateral routes.

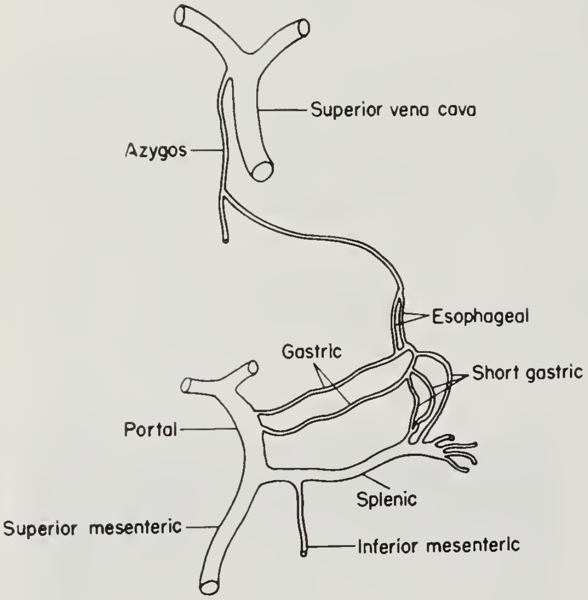

FIG. 4. Diagram of portal system connections through the gastric and esophageal veins to azygous system.

Our material includes 76 splenoportograms on 68 patients. Of these, 57 examinations are suitable for the present analysis. The studies were made with varying technics in the early part of the series, but most have been made after the injection of 25 c.c. of 50 per cent Hypaque with films exposed at intervals of 0.66 second for the first 6 to 7 seconds, followed by exposures at intervals of 1.3 seconds for 12 to 13 seconds. This yields 19 films in about 20 seconds and allows us to evaluate the rate of flow in early films, with wider spacing for later, more slowly developing phenomena.

In the 57 splenoportograms, gastroesophageal collaterals (A1, table 1) were seen 29 times, inferior mesenteric reflux 9 times, splenocaval channels (B1, table 1) 26 times, and portocaval collaterals (B2, table 1) 7 times. Ten cases of the 57 failed to show collaterals in the splenoportogram. Eleven cases exhibited collateral channels measuring 10 mm. or greater on the films. Table 2 shows the relationships of portal

TABLE 2

Relationships of Collateral Pathways with Portal System Pressure, Esophageal Varices, and Bleeding Episodes

Type of Collateral (see table 1)	Pressure in mm. H_2O			
	Less than 300	301–400	401–500	500+
Reverse flow in gastroesophageal veins	8 cases 7v 1b	13 12v 6b	8 8 6b	1 1v 1b
Reverse flow in inferior mesenteric veins	2 2v	5 5v 3b	2 1v	
Splenocaval abnormal channels	9 7v 4b	9 9v 6b	8 7v 5b	
Portocaval abnormal channels	1 1v 1b	2 2v	1 1v 1b	1 1v 1b
None	3	4 2v 1b	2 2v 2b	

v—Number of cases with esophageal varices.
b—Number of cases with gastrointestinal hemorrhage.

system pressure, the occurrence of esophageal varices, and the occurrence of bleeding episodes to the types of collaterals seen in the splenoportogram. Table 3 gives further details on the 11 cases showing large natural shunts.

TABLE 3

Large Natural Portosystemic Shunts

Case No.	Esophageal Varices*				Splenic Pulp Pressure mm. H_2O	Portal Vein Pressure Preop./Postop. mm. H_2O	Liver Function Tests	Liver Biopsy	Clinical Diagnosis
	Type of Collateral	Clinically	Ascites	Bleeding					
1 Fig. 1	A-1, B-1 splenorenal shunt	+	0	+	420	390/209	Normal	0	Cavernous transformation portal vein
2	B-2 transhepatic collateral	+	0	0	375	—	Abnormal	Portal cirrhosis	Cirrhosis
3	A-1, B-1 splenorenal shunt	+	0	+	430	470/265	Abnormal	Juvenile cirrhosis	Portal fibrosis
4 Fig. 7	B-1, B-2 transhepatic	+	+	+	470	360/210	Abnormal	Portal cirrhosis	Cirrhosis
5 Fig. 3	B-1 splenorenal	+	+	+	150	—	Abnormal	Laennec's cirrhosis	Cirrhosis
6	B-1 transhepatic (long tortuous vein)	+	0	+	520	380/230	Normal	Fatty metamorphosis	Cirrhosis
7	A-1, B-1 transhepatic	+	+	+	—	502/213	Abnormal	Postnecrotic cirrhosis	Biliary cirrhosis
8 Fig. 5	A-1, B-1 paraesophageal	+	0	+	400	440/220	Abnormal	Laennec's cirrhosis	Cirrhosis
9	B-2 transhepatic	+	0	0	—	—	Borderline	—	Cirrhosis
10	A-1, A-2 inferior mesenteric	+	0	+	320	440/150	Abnormal	—	Cirrhosis
11	B-1 splenorenal	+	0	0	270	—	Abnormal	Postnecrotic cirrhosis	Cirrhosis

* See text for abbreviations.

Esophageal varices were visualized in 22 of the splenoportograms. Varices were demonstrated by esophagoscopy or barium swallow with X-rays in the subjects of 46 of the splenoportograms. Demonstration of varices by splenoportography did not occur in any case in which they were not shown by the other means.

DISCUSSION

Table 2 indicates that the 9 patients showing no collaterals in the splenoportogram are fairly evenly distributed over the pressure groups. About half of these patients had varices, and 3 had bled, facts which correlate better with the pressure than with the absence of collaterals. Similarly, in the other 4 groups the spread of cases over the pressure groups is essentially even, and the great majority have varices. There is some tendency toward correlation of the bleeding episodes and visualization of the B type collaterals. The A type, or reverse flow in normal channels, is seen a total of 38 times, and 16 bleeders are included in this group, but only 1 falls in the low pressure group. By comparison, the B type, or abnormal channels, are seen 31 times, including 18 bleeders, but with 5 of these falling in the lower pressure group.

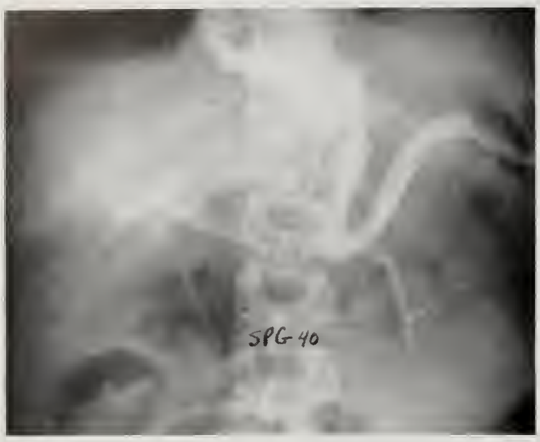

FIG. 5. Case 8, table 3. Huge natural shunt via gastroesophageal varices. Some of this opacified blood apparently went directly into right atrium, perhaps via coronary sinus, and some probably continued through azygous system. (From Sullivan, Hamilton and Gamble.[1] Used by permission of Paul B. Hoeber, Inc., publishers.)

The large collaterals, 1 cm. or more in diameter, are of particular interest in that it would seem that they would be capable of decompressing the portal system in the same manner as the surgically-produced shunts. Rousselot et al[8] found in similar cases that large natural shunts did not correlate with normal or relatively low portal pressures, nor with reduction in incidence of bleeding from ruptured varices. In general, surgical shunts in those cases produced a good reduction in portal pressure, and, as observed in postoperative splenoportography, the natural shunts ceased to function.

Our 11 patients classified as having large natural shunts showed a tendency to fall in the higher pressure groups and to exhibit type B collaterals. Four patients showed both A and B type collaterals, 1 the A type only, and 6 the B type only. As noted in table 3 the abnormal channels (B types) were the sites of the large shunt in 9 of the 11 patients. All of these had varices. Three of the 11 patients had not bled, a fact apparently unrelated to portal pressure levels. Case 31, with a splenic pulp pressure of 150 mm. of water, the lowest in the entire series, had had a bleeding episode.

Rousselot et al[8] pose the question of why large natural shunts do not reduce portal pressure. Their work indicates that, in general, cases with large shunts and extensive collateralization are associated with higher pressure than cases with fewer collaterals. The same is true in our smaller number of cases. This trend becomes logical if one considers that collaterals (blood flow in abnormal channels or in abnormal direc-

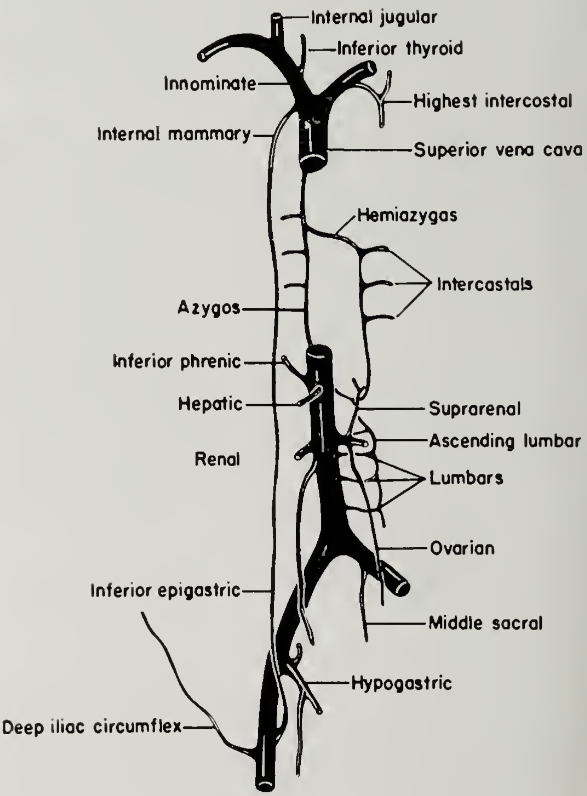
Internal jugular
Inferior thyroid
Innominate
Highest intercostal
Internal mammary
Superior vena cava
Hemiazygas
Intercostals
Azygos
Inferior phrenic
Hepatic
Suprarenal
Ascending lumbar
Renal
Lumbars
Ovarian
Inferior epigastric
Middle sacral
Hypogastric
Deep iliac circumflex

FIG. 6. Diagram of deep systemic veins. Epigastric and azygous veins provide general pathways connecting inferior and superior venae cavae. Note interconnections of phrenic, suprarenal, renal, and ascending lumbar (retroperitoneal) veins. (From Quiring.[2] Used by permission of the publishers.)

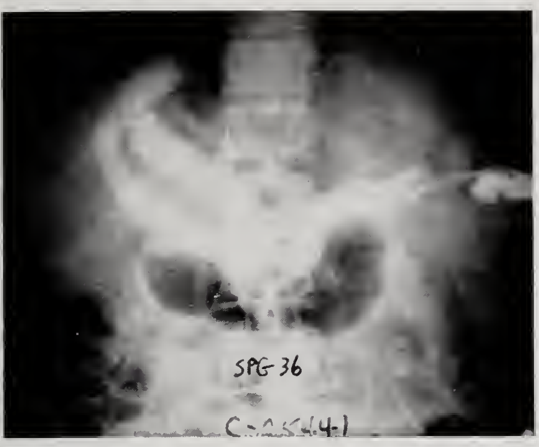

FIG. 7. Case 4, table 3. Serial films showed that the large collateral originated near bifurcation of the portal vein, filling after the portal vein. It may represent umbilical vein recanalized and dilated, but patient did not show caput medusae. It more likely drains into vena cava, via a plexus of retroperitoneal veins or deep epigastric veins.

tions) represent a bodily reaction to an abnormal situation. This abnormal situation is increased resistance to portal blood flow through the liver. Probably, in early stages, higher pressure compensates sufficiently, but as liver disease or other obstruction progresses, flow decreases, pressure mounts, and collateralization increases. When the large natural shunts are considered in this light, it is not surprising that, in the majority of cases, portal hypertension is not relieved.

SUMMARY

The types of collateral pathways between portal and systemic veins have been classified into 2 groups and discussed. The first of these includes normal venous channels which carry blood in a reversed direction. The second includes abnormal connections between the 2 systems.

Large portosystemic shunts may be formed spontaneously and demonstrated radiographically. Portal venous pressure, however, remains elevated in these cases.

Correlation of the type of collateral, and in particular the large natural shunt, with portal pressure, esophageal varices, and bleeding episodes, has been attempted. The number of cases is small, but the trends follow those of other series and indicate that the degree and type of collateralization on the splenoportogram is, in general, an indication of the severity of disease. The development of abnormal channels is associated somewhat more frequently with bleeding episodes, and 9 of 11 of the large natural shunts in this series occurred through abnormal channels, as opposed to reverse flow through normal channels in 2 cases. The majority of these large shunts fall in higher portal groupings. Reliance cannot be placed on these trends in the individual case.

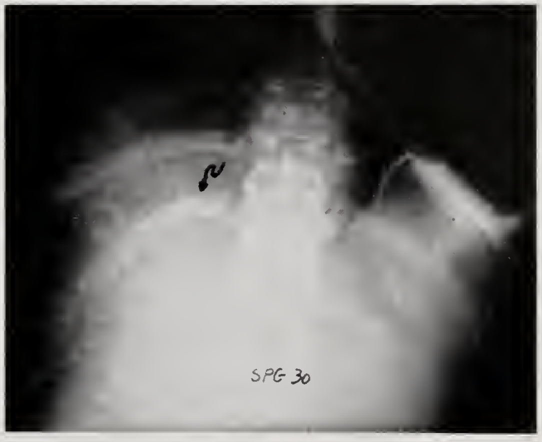

FIG. 8. A most unusual collateral flow, from spleen directly to region of atria or coronary sinus. The patient had a huge, partially calcified sarcoma (arrows point at calcification) invading entire liver and upper abdomen. The connection is presumed to have formed via adhesions from spleen with development of pathway across diaphragm and lung, not normally found either in embryo or in adult.

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(*Continued on page 708*)

Physiology of Congenital Heart Disease

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UNDERSTANDING OF THE ALTERED DYNAMICS associated with congenital heart disease has been greatly facilitated by the development of specialized cardiovascular diagnostic technics. Based on appreciation of these fundamental alterations, advances in diagnostic technics have gone hand in hand with reparative surgical strides. Measurement of pressures and oxygen saturation, as well as injection of indicator substances, either photospectrometric (Evans blue, cardiogreen), isotopic, or radiopaque in the right chambers of the heart, has become commonplace by means of venous (right heart) catheterization.[1-5] The dynamics of the left cardiac chambers have more recently come under study by means of needle puncture of the left atrium transbronchially,[6, 7, 8] posteropercutaneously,[9, 10] and transseptally.[11] The left ventricle has been entered directly by anteropercutaneous needle puncture[12] and by retrograde catheterization of the aorta.[13] Correlation of pressure relationships, oxygen saturations, and the distribution of indicator-dilution substances from several or all chambers and great vessels has developed an integrated understanding of congenital defects and the dynamics and interrelations of systemic and pulmonary circuit-flow pressure and resistance. Angiocardiography, a roentgenographically visible indicator-dilution technic, is valuable in defining anatomic abnormalities and relationships, as well as altered physiologic dynamics. It is most useful in the cyanotic lesions with veno-arterial shunting. Simple venous angiocardiography has yielded to catheter injection into selective cardiac chambers with rapid bi-plane roentgenography or image amplification cinefluorography technics.

CLASSIFICATION

Congenital defects can be classified simply into several major categories which have the following large common denominators:

A. Systemic-pulmonary communications with pulmonary blood flow greater than systemic.

B. Obstructive lesions without systemic pulmonary communication.

C. Systemic-pulmonary communications with pulmonary flow less than systemic.

D. Common mixing chamber lesions.

E. The transpositions.

For a better understanding of the clinicophysiologic alterations, the various defects will be discussed within this framework.

A. *Communications between the systemic and pulmonic circuits with pulmonary flow greater than systemic (pulmonary recirculation: "left-to-right" or arteriovenous shunt).* Communications may exist at any or at multiple levels and include atrial septal defect, anomalous drainage of a pulmonary vein or veins into the right atrium, persistent atrioventricular canal, ventricular septal defect, and aortic-pulmonary communications, either aortic-pulmonary septal defect or patent ductus arteriosus. The normal relationship of greater pressures in the left cardiac chambers results in left-to-right shunting through these defects, and they are, in their uncomplicated forms, acyanotic lesions. Abnormal murmurs are produced by flow through the defect in the case of high pressure shunts, or by increased pulmonary blood flow alone in the defects at the atrial level. The continuous "machinery-like" murmur in systole and diastole characterizes aortic-pulmonary artery communication and reflects the usual pressure gradient that exists between the vessels in both phases of the cardiac cycle. Widening of the blood pressure and bounding peripheral pulse characterize the run-off from the aorta into the pulmonary bed. Early diastolic rumbling flow murmurs due to increased atrioventricular valve flow are common with large defects. These are mitral in origin with ventricular and aortic-pulmonary shunts, or tricuspid in origin with atrial defects. Right ventricular emptying, and hence pulmonary valve closure, is delayed in large-volume, low-pressure shunts, such as those at the atrial level, and results in wide and usually fixed splitting of the second sound.[14] Development of increased pressure in the pulmonic circuit diminishes the interval between aortic and pulmonary valve closure and greatly accentuates the pulmonic component. Decrescendo high-pitched diastolic murmurs of pulmonic incompetency are frequent with marked pulmonary hypertension.

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The pulmonary trunk and branches are characteristically enlarged in this category, and the increased pulmonary flow is manifested by increased pulmonary vascularity and hyperpulsatility (hilar dance) roentgenographically. Cardiac chamber enlargement and electrocardiographic changes usually mirror the altered hemodynamics and location of the defect. The effects of increased volume work of a ventricle (diastolic overload) must be distinguished from increased pressure (systolic overload) work. A chamber handling increased volume dilates, without significant hypertrophy, often to a considerable size. Diastolic overload is manifested in the electrocardiogram by RSR′ complexes over the right ventricle (delayed activation of the right ventricle; incomplete right bundle branch block) or by increased QRS and T potential over the left ventricle (figure 1-A and B). An increased ejectile resistance, without

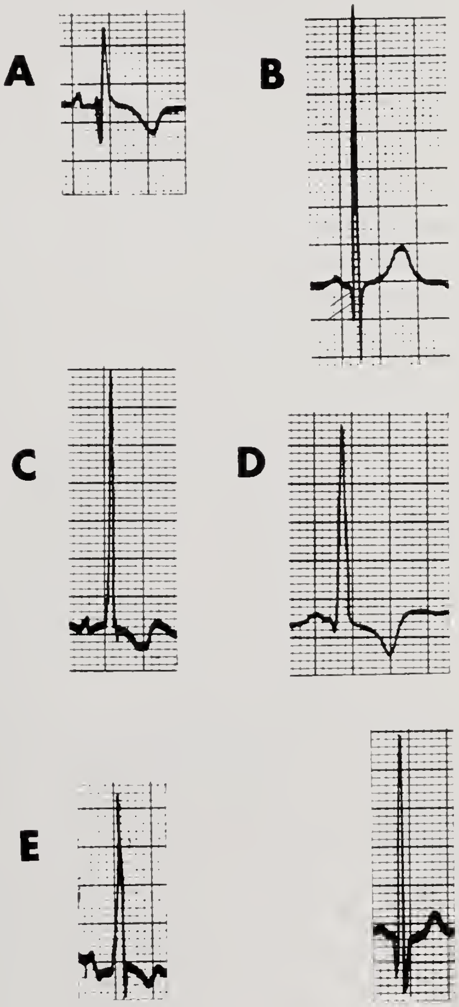

Fig. 1. A. Diastolic (volume) overload of right ventricle. Lead V1 of 8-year-old patient with atrial septal defect.

B. Diastolic overload of left ventricle. Lead V5 of 5-year-old patient with ventricular septal defect.

C. Systolic (pressure) overload of right ventricle. Lead V1 of 3-year-old patient with pulmonic stenosis.

D. Systolic overload of left ventricle. Lead V6 of adult with aortic stenosis.

E. Systolic overload of right ventricle and diastolic overload of left ventricle. Leads V1 and V7 of 2-year-old patient with large ventricular septal defect, left-to-right shunt, and pulmonary hypertension.

increase in stroke volume, may induce severe myocardial hypertrophy with little or no evident overall increase in ventricular size. Electrocardiographically, increased R potential over the involved ventricle with loss of ventricular gradient (inverted ST-T) reflects this change (figure 1-A and D). Combinations and degrees of each are not uncommon (figure 1-E).

Low-pressure atrial shunts produce volume overload of the right atrium and ventricle and are not usually complicated by increased pulmonary resistance or pressure in patients under the age of 20. Small defects at the ventricular or aortic-pulmonary level rarely alter the cardiac size or electrocardiogram. Larger defects produce diastolic (volume) overload of the left ventricle and, as in the case of the former, varying degrees of volumetric overload of the right ventricle. With increasing defect size the pulmonic circuit is progressively exposed to increasing effects of the left ventricular thrust and pulmonary hypertension supervenes, resulting in systolic (pressure) overload of the right ventricle. Shunt volume is dependent, therefore, upon defect size and the pulmonary vascular resistance. The latter can be due to active pulmonary arteriolar constriction or to secondary intimal and medial arteriolar vascular thickening, proliferation, and obstruction. The degree of reversibility is dependent upon the relative degrees of these changes.

Visible and palpable evidence of these altered dynamics in the form of chest deformities, palpable ventricular overactivity and thrills, and palpable accentuated pulmonic valve closure round out the clinical profile. Catheterization identifies the level of the shunt by demonstrating arterialization of the venous blood at the involved and more central chambers. Indicator-dilution curves recorded at a systemic artery following a right-heart injection show a prolonged downslope, due and proportional to the volume of pulmonary recirculation (figure 2-A). An indicator introduced into the left side of the heart or distal pulmonary artery will be sensed prematurely in the right side of the heart at the level of the shunt and in more central chambers, thus providing another technic for localizing defects (figure 2-B). Quantitation of shunt magnitude is possible by the Fick method with the gaseous indicators or by semiquantitative interpretation of the indicator-dilution curves. Angiocardiography has little place in the diagnosis or evaluation of this group of lesions, although left heart or pulmonary artery contrast injections have been effectively utilized by some investigators to outline these defects. Pulmonary

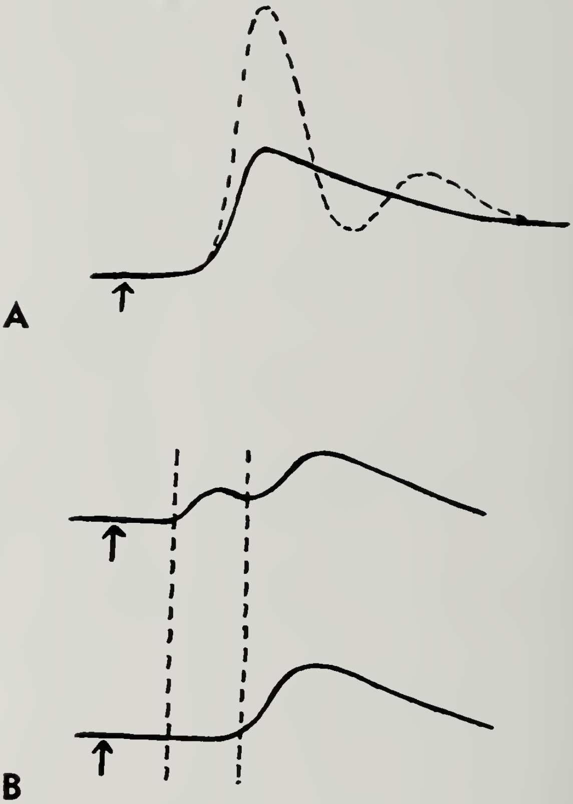

Fig. 2. A. Indicator-dilution curve; injection (arrow) into a right heart chamber, sensed at a systemic artery in a case of large left-to-right shunt. Normal curve, dotted line, superimposed. Decreased peak concentration and prolonged downslope are due to pulmonary recirculation of indicator.

B. Indicator-dilution curves; injection into the distal pulmonary artery, sensed (upper) at the right ventricle and (lower) at the right atrium, demonstrating premature appearance in right ventricle in case of ventricular septal defect with left-to-right shunt.

artery pressure is a function of flow and resistance and can be elevated from large flows, or secondarily from vasoactive or morphologic pulmonary arteriolar narrowing. Because of the reciprocal relationship of these parameters, it can be seen that increasing resistance acts as a limiting factor to the volume of left-to-right shunts.

B. *Obstructive lesions without communication between the systemic and pulmonary circuits.* This group is mainly composed of ventricular outflow obstructive lesions, valvular or subvalvular (pulmonary stenosis, aortic stenosis), and coarctation of the aorta. Right ventricular outflow obstruction may also result from vascular obstruction at the pulmonary arteriolar level, rarely as an isolated lesion (primary pulmonary hypertension), but much more frequently as a complication of shunt defects in Group A.

Increased resistance to ventricular ejection results in systolic overload of the respective ventricle, with hypertrophy, ultimate dilatation, and failure. Manifestations of decreased cardiac output, especially upon increased demand of exertion, are common with severe obstruction. Hemodynamic demonstration of transvalvular systolic gradients by right- or left-heart catheterization is diagnostic, as is the harsh crescendo-decrescendo (diamond-shaped) murmur mirroring the ventricular ejection through an obstructed outlet. Prolonged ventricular emptying proportionately delays the respective semilunar valve closure, and this component of the second sound is consequently late and, proportionate to the severity of the obstruction, diminished in intensity. Sphygmomanometric measurement alone on upper and lower extremities will confirm a coarctation of the aorta, while associated collateral development, frequently extensive, can be appreciated by auscultatory bruits, palpable intercostal vessels, and radiographic evidence of rib notching. Clinically, aortic arch hypoplasia produces a similar picture, although measurement of the blood pressure in both upper extremities and bilateral carotid pulse comparison serve to locate the extent and degree of obstruction, as well as to demonstrate the rare (2 per cent) coarctation of the aorta proximal to the left subclavian artery origin.

Association of obstructive lesions with those in Group A is common, with the clinical profile representing a summation of the 2 defects. Most often pulmonary outflow obstruction is associated with ventricular (less commonly atrial) septal defects. This combination produces a clinical spectrum, the determinants of which depend on the varying degrees of severity of the associated defects. Combinations of mild pulmonary stenosis with systemic-pulmonary communications result in the hemodynamics of Group A with persistent left-to-right shunt and without cyanosis. Severe pulmonic stenosis, as described in the next category, results in right-to-left shunt and cyanosis. Eponymic nomenclature is best avoided, since "tetralogy of Fallot" (combined ventricular septal defect and pulmonic stenosis) can be used with either, without defining the extreme hemodynamic differences between them.

C. *Communications between the systemic and pulmonic circuits with pulmonary flow less than systemic (systemic recirculation, "right-to-left," or veno-arterial shunt).* Association of systemic-pulmonary communications with severe obstruction to right-heart emptying results in reversal of the normal pressure relations between the right and left chambers, with shunting from right to left and consequent arterial desaturation. Obstruction to right ventricular emptying is most frequently in the form of pulmonary stenosis (valve, infundibular, or both), hypoplasia, or atresia (pseudotruncus). The obstruction, however, can also result from advanced pulmonary arteriolar obstructive changes secondary to pulmonary hypertension (complicating a shunt lesion in Group A). Diminished pulmonary flow, both absolute and relative to systemic flow, is the trademark of this category. Right ventricular overload in this group is of the systolic type. Radiographically, the lung fields show decreased vascularity and, because of veno-arterial shunting, cyanosis is present. Reversal at the patent ductus level produces the interesting anomaly of cyanosis which is confined to the lower half of the body. Systemic desaturation stimulates secondary polycythemia, with its vascular complications caused by increased blood viscosity and tendency to thrombosis. Severe deprivation of pulmonary blood flow is attended by episodic cerebral hypoxia, especially at times of increased demand, with accompanying syncope and collapse.

Catheterization of the right side of the heart usually demarcates the site and degree of right ventricular outflow obstruction. Indicator-dilution curves recorded systemically localize the level of the communication by the premature systemic appearance of the indicator following injection into the involved or more peripheral chambers (figure 3). Angiocardiography finds its greatest usefulness in these defects and delineates the level of the shunt, as well as the structural anatomy of the right-heart obstructive lesion. Injection of radiopaque media is most hazardous when the obstruction is at the arteriolar level with pulmonary hypertension.

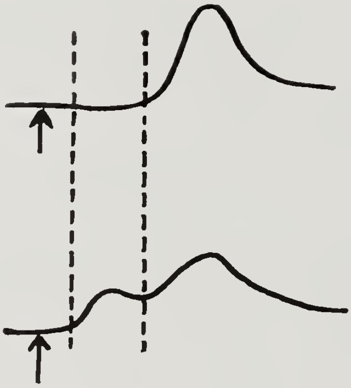

Fig. 3. Indicator-dilution curves; (upper) following injection of indicator into the pulmonary artery, and (lower) the right ventricle, sensed at a systemic artery, showing premature peripheral appearance of the indicator in a patient with pulmonic stenosis and ventricular septal defect, with right-to-left shunt at the ventricular level.

D. *Common mixing chamber* (*total anomalous venous drainage into the right atrium, single atrium, single ventricle, persistent truncus arteriosus*). Although variable systemic desaturation is characteristic of this group, its degree depends upon the relationship of pulmonary to systemic blood flow and hence upon the resistance in the respective arteriolar beds (or at the ventricular outflow tract, if there is associated pulmonic stenosis). Pulmonary vascularity, radiographically, is dependent upon these relationships. In general, with high pulmonary to systemic flow ratios, near normal systemic saturation may be maintained. Total anomalous pulmonary-vein drainage and single atrium produce a clinical profile not dissimilar to that of atrial septal defect, although secondary pulmonary hypertension is considerably more frequent. Single ventricle and persistent truncus arteriosus subject the pulmonary bed to systemic pressure unless pulmonary stenosis coexists with the former. The single second sound at the base characterizes the solitary semilunar valve of the latter lesion. When pulmonary flow is large and aortic run-off excessive, wide pulse pressure and continuous murmurs are common in persistent truncus arteriosus. Ventricular overload is determined by the respective flows through the 2 circuits and is related to the volume of venous return to the respective ventricles.

With a common mixing chamber, bidirectional shunt occurs, and barring an element of "streamline flow," pulmonary artery and systemic oxygen saturation are equal. Indicator-dilution curves (systemic sampling) demonstrate partition of the flow with right-heart injection at the involved or more peripheral chambers (right-to-left shunt with premature systemic appearance), as well as evidence of pulmonary recirculation (left-to-right shunt). Injections central to the common mixing chamber disclose pulmonary recirculation only. Single ventricle and truncus arteriosus closely mimic communications at the ventricular and great-vessel level (discussed in "A"), with superimposed pulmonary hypertension. Differentiation, even with excellent angiography, is frequently difficult.

E. *Transpositions of the great vessels.* The transpositions most frequently involve the great arterial trunks and rarely the venous return. Remarkable variability and coexistence of associated multiple defects alter the usual poor prognosis by permitting varying degrees of admixture between the systemic and pulmonic circuits. This group is characterized by severe systemic desaturation with increased pulmonary vascularity. Catheterization, indicator-dilution curves, and angiography disclose the reversed vessel relationships as well as evidences of bidirectional shunting at one or multiple levels.

CORRECTIVE SURGERY

Communications between the systemic and pulmonic circuit with significant unidirectional left-to-right shunt uniformly benefit by surgical closure which restores equality to systemic and pulmonary flow. Elevated pulmonary-artery pressure can be expected to regress following closure of the causative defect, if pulmonary flow exceeds systemic flow and is therefore reduced by surgery. Increased pulmonary pressure decreases rapidly when it is secondary to high flow and minor vasoactive elevation of pulmonary resistance, and more slowly when it is secondary to morphologic arteriolar changes. When the pulmonary resistance exceeds and the pulmonary flow is less than that in the systemic circuit, surgical closure of the defect is of no value and is usually catastrophic.

Combined defects, such as right-ventricular outflow obstruction with septal defect, are amenable to correction within certain anatomic limitations, since closure of the shunt with relief of the right ventricular outflow obstruction is simultaneously possible. When total correction is not feasible because of age or the outflow-tract anatomy, a surgical systemic to pulmonary artery shunt (Blalock, Potts) increases pulmonary blood flow and decreases systemic desaturation. This procedure, however, is palliative rather than curative. Pathophysiologic changes secondary to pure obstructive lesions are completely correctable within anatomic limits, if treated prior to development of alterations in the ventricular myocardium, such as progressive dilatation and failure.

SUMMARY

A simplified physiologic approach to congenital heart disease has been presented. Utilization of such an approach permits sounder and more rational diagnosis and management of these problems.

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The Murmur of Mitral Stenosis with Sinus Rhythm

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It is important that potentially correctable heart disease be recognized. Mitral stenosis is such a disease. The murmur of mitral stenosis is not always recognized and, on occasions, is not appreciated as a murmur because of its low-pitched, vibrating character. Inexperienced physicians when listening for a murmur may search only for a swishing sound. Murmurs arising from a high pressure area (100 mm. Hg or more), such as the systolic murmur of mitral insufficiency or the diastolic murmur of aortic insufficiency, have this quality. In contrast, the pressure in the left atrium cannot exceed for long the osmotic pressure of the plasma proteins (30 mm. Hg) without precipitating pulmonary edema. This low pressure in the left atrium is ordinarily incapable of producing a swishing murmur but causes a coarse, low-pitched diastolic vibration or rumble, which is best heard with the bell-type stethoscope held lightly against the chest just medial to the apex. Another factor contributing to the failure to recognize the murmur of mitral stenosis is that its timing is inaccurately described in many current references. It is usually described as a presystolic crescendo murmur that ends in an accentuated first sound. The presystolic crescendo murmur, however, is simply part of the complete murmur and is not commonly encountered as an isolated auscultatory finding.

Many texts describe a mid- or late mid-diastolic rumble as characteristic of mitral stenosis. Some authors have mentioned the occurrence of an early diastolic rumble in the presence of atrial fibrillation with bradycardia, as though the murmur made its appearance with the onset of fibrillation. Preoccupation with the presystolic component of the murmur apparently has made it difficult to recognize what was occurring in the remainder of diastole, until the presystolic murmur disappeared with the onset of atrial fibrillation. The present study indicates that the murmur of mitral stenosis with normal sinus rhythm ordinarily begins in early diastole and characteristically reaches its greatest intensity in the first and last thirds of diastole. The murmur is usually less intense or is even absent in mid-diastole.

Method

As part of the intern and medical residency training at Brooke Army Hospital,* sound tracings with a Sanborn 2-channel photographic recording phonocardiogram were taken during a cardiovascular work-up. This study is an analysis of 37 sound tracings recorded in patients with sinus rhythm who were considered to have relatively pure mitral stenosis. The diagnosis was confirmed in more than half at mitral commissurotomy. Though the clinical diagnosis seemed unquestionable, some patients had no significant disability from their disease or were not subjected to surgery for other reasons. None of the patients had loud mitral systolic murmurs. None had significant diastolic murmurs of pulmonic or aortic insufficiency. All tracings were recorded from the mitral area with the patient in the recumbent or left lateral position. The cardiac rate varied from 54 to 106 per minute. Diastole was considered to begin at the onset of the second heart sound and end at the beginning of the first heart sound. Diastole was measured and divided into 3 equal parts. The first third will be referred to as early diastole, the second third as mid-diastole, and the last third as late diastole or presystole. The records were examined to determine in which third of diastole the murmur reached the greatest intensity. To avoid fortuitous variation, 5 consecutive cardiac cycles were studied. The amplitude recorded on the sound tracing was assumed to reflect the intensity of the murmur. A murmur was required to have significant duration. A single sound, as that produced by an opening snap, was not considered to be a murmur.

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RESULTS

In 25 of the 37 tracings the murmur definitely reached maximum intensity in a particular third of diastole, usually in the first or last third (table 1). Only 2 tracings showed maximum intensity of the murmur in mid-diastole. In 12 tracings maximum intensity was essentially equal in 2 separate thirds of diastole. This was usually a loud early murmur which diminished, only to regain force in late diastole.

TABLE 1

Tracings in Which Murmur Was Definitely Loudest

Early diastole	10
Mid-diastole	2
Late diastole	13

In table 2 the intensity of the murmur in early diastole is compared with that in mid-diastole. In only 5 of the 37 cases did the mid-diastolic murmur exceed the early diastolic murmur. In approximately half the intensity of the early diastolic murmur definitely exceeded that of the mid-diastolic component. In the remainder it was approximately equal.

TABLE 2

Comparison of Intensity of the Murmur in Early and Mid-diastole

Louder in early diastole	18
Approximately equal intensity	14
Louder in mid-diastole	5

Table 3 shows the tracings grouped according to the cardiac rate. This suggests that cardiac acceleration accentuates the late diastolic (presystolic) murmur, as pointed out previously by Levine and Harvey.[1] With bradycardia the prolonged period of diastole allows left ventricular filling to be relatively complete before the atrium contracts. At faster rates atrial contraction occurs during more rapid ventricular filling and produces a louder presystolic murmur.

TABLE 3

Relationship of Cardiac Rate to Murmur

Cardiac Rate	Number of Tracings	Tracings in Which Murmur Was Definitely Loudest in a Particular ⅓ of Diastole		
		Early	Mid	Late
Below 70/min.	10	5	0	1
70 to 89/min.	14	4	1	6
90 or above/min.	13	1	1	6

DISCUSSION

The findings of this study are not surprising in view of the generally accepted concept that the murmur of mitral stenosis is produced by turbulence incident to ventricular filling. Ventricular filling normally occurs almost completely in early diastole.[2] An early diastolic murmur may be the only auscultatory finding of mild mitral stenosis. As stenosis progresses, left ventricular filling is prolonged and the murmur extends throughout diastole. Atrial contraction usually causes presystolic accentuation of the murmur. Similarly, pressure tracings from the left atrium in patients with mitral stenosis have shown the pressure to be highest in early diastole with a steady decline through mid-diastole until there

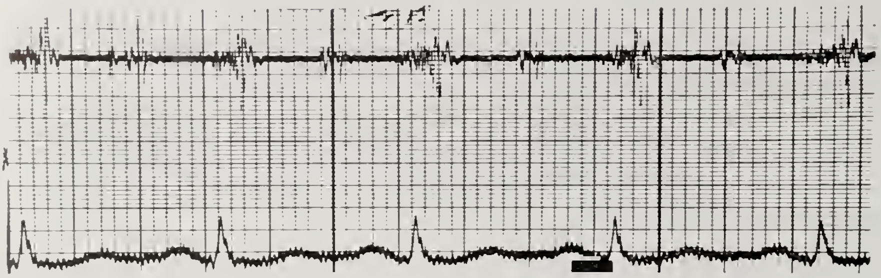

Fig. 1.* Murmur is loudest in presystole, early and mid-diastolic components being very faint. Distinct opening snap is present in early diastole.

is a late presystolic rise at the time of atrial contraction.[3]

In clinical timing of a murmur it is imperative that the physician be able to identify a specific portion of the cardiac cycle and effectively focus his attention on that portion of the cycle. It is relatively easy to identify the second heart sound and focus one's attention on that phase of the cardiac cycle which follows immediately. All but 5 of these 37 patients had a characteristic early diastolic rumble which closely followed the second heart sound. The other 5 had a faint early diastolic murmur, which, however, could not, by auscultation alone, be distinguished from the diastolic murmur often heard in atrial septal defect or other conditions associated with increased diastolic filling of the ventricles. Figure 1 shows the sound tracing of 1 of the 5 patients with only a faint early diastolic murmur. The distinct opening snap and loud presystolic murmur, however, clearly indicated the presence of mitral stenosis.

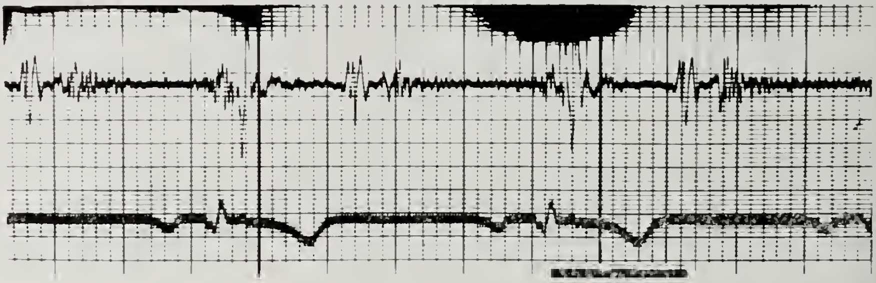

Fig. 2. Characteristic murmur with distinct gap between second heart sound and onset of early diastolic murmur. Murmur is relatively loud in early diastole and practically absent in mid-diastole. Gap between second heart sound and onset of the murmur must have been a factor in causing such murmurs to be described as mid-diastolic in the past.

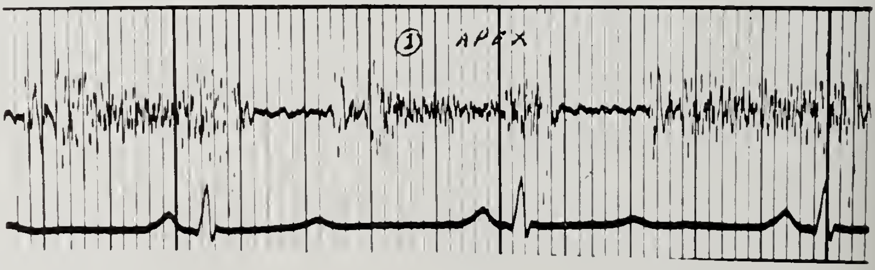

Fig. 3. Tracing shows loud murmur following distinct gap after second heart sound. Murmur starts with great intensity and is maximal in early diastole.

In learning to recognize the early diastolic rumble of mitral stenosis, it is often helpful to imagine that the second heart sound is produced by a stick striking a drum; if the stick is allowed to vibrate loosely after striking the drum it will be heard to "bounce" several times after producing the initial sound. Such a rumble or repeated bounce following the second heart sound is often the earliest auscultatory evidence of mitral stenosis; the first extra bounce often represents the opening snap. Frequently, a short gap, representing the interval of isometric relaxation of the ventricle, separates the second heart sound from the opening snap and the onset of the diastolic rumble of mitral stenosis (figures 2 and 3). This short gap often enables the clinician to accurately time the onset of this murmur. There is no such auscultatory landmark to aid the physician in identifying mid-diastole. Neither can the presystolic murmur be timed as definitely by the clinician, since it merges into the wider first heart sound and often is difficult to clearly define even with a sound tracing. This short gap following the second heart sound is probably the reason for describing such murmurs as mid-diastolic, in an effort to differentiate their timing from the diastolic murmurs of aortic and pulmonic insufficiency which start with the second heart sound. However, to describe these murmurs as mid-diastolic is confusing and suggests that the murmur starts in mid-diastole.

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* Figures 1 through 6 are representative sound tracings of patients with pure mitral stenosis and sinus rhythm. The second heart sound usually corresponds in time to the end of the T wave of the electrocardiogram and represents the beginning of diastole. The first heart sound starts about the end of the inscription of the QRS complex and represents the end of diastole.

Examination of sound tracings indicates that the murmur definitely starts in early diastole and that this component of the murmur is usually louder than the mid-diastolic component. Furthermore, many diastolic rumbles do not show this gap but seem to start immediately after the second heart sound (figures 4, 5 and 6).

It is not denied that many patients with tight mitral stenosis have loud murmurs extending through mid-diastole. It seems illogical and confusing, however, to identify a murmur with that phase of the cardiac cycle in which it ordinarily diminishes or is absent. The onset of the murmur of mitral stenosis is usually clear, distinct, fairly loud, and relatively easy to time. It is my experience that the concentration of particular attention on early diastole is most helpful in recognizing the rumble of mitral stenosis. It is a useful

(*Continued on page 708*)

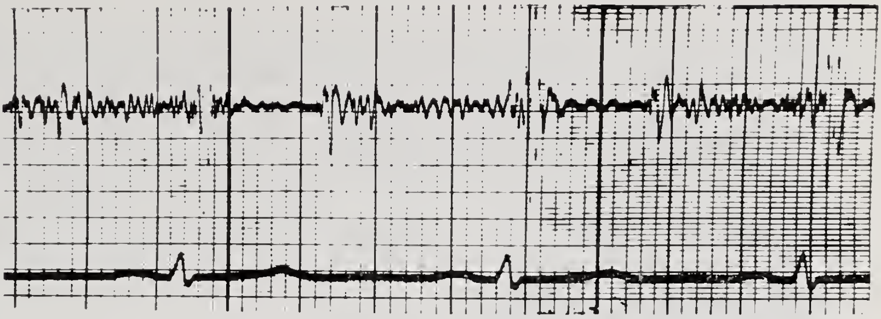

FIG. 4. Characteristic murmur which extends through diastole; murmur reaches greater intensities in early and late diastoles.

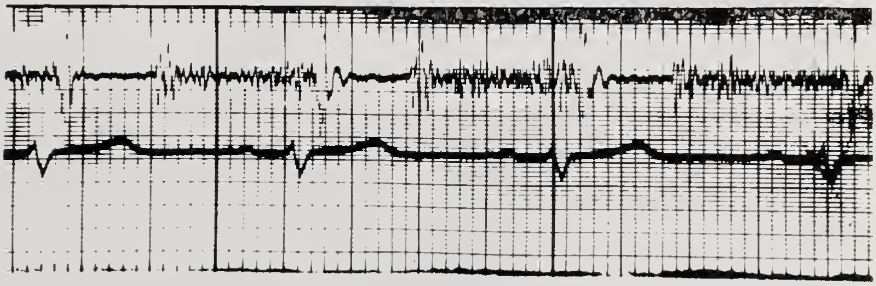

FIG. 5. Murmur extends through diastole with some variation in intensity from cycle to cycle. In general, the murmur is of approximately equal intensity in all thirds of diastole. As in figure 1, no distinct initial gap separates the murmur from the second heart sound.

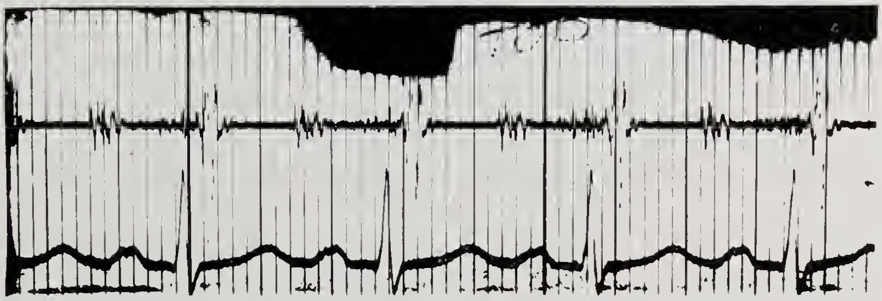

FIG. 6. Tracing shows a fairly loud early diastolic murmur which practically fades out in mid-diastole only to return with increased intensity in late diastole.

Asthma Associated with Disseminated Necrotizing Granulomatous Vasculitis, the Churg-Strauss Syndrome

Report of a Case

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In 1951 Churg and Strauss[1] drew attention to a group of cases which represent a syndrome with characteristics of diseases which are generally held to represent hypersensitivity phenomena. They reported 13 cases with severe asthma, mild fever, eosinophilia, and signs of vascular embarrassment of various organs combined with a characteristic necrotizing granulomatous process involving primarily vascular walls and interstitial collagenous connective tissue—features which identify the process as a distinct entity. Paucity of further reports in the literature prompts this report of a condition which ought to be recognizable and separable from other diseases of hypersensitivity such as necrotizing angiitis and Wegener's granulomatosis.

Report of a Case

The patient, a 38-year-old Negress, was in good health until late in the summer of 1950, when she began to experience mild episodes of wheezing and difficult breathing. In January 1950, because of fever and cough, she was hospitalized with what was thought to be atypical pneumonia. She was treated with penicillin. Her asthma worsened. She had frequent episodes of shortness of breath and wheezing requiring treatment with antihistamines and ephedrine. On 4 occasions, in the first half of 1950, she required hospitalization, during which she received aminophylline intravenously. In August 1950 a chest film taken during hospitalization showed a pericardial effusion. Because of a clinical impression of myxedema, she was started on desiccated thyroid, 1 grain daily. Neither a B.M.R., nor serum cholesterol, nor serum protein-bound iodine studies were done, however. This was continued for several months until she discontinued its use. During this period the pericardial effusion gradually cleared up and she experienced marked symptomatic improvement. During the various hospitalizations she had fever up to 100°F and persistent eosinophilia.

In March 1952 she was hospitalized for 17 days because of severe asthma and was treated with repeated aminophyllin, demerol and adrenalin injections. At that time she was noted to be 2 months' pregnant. She was asymptomatic throughout the course of pregnancy and was delivered uneventfully of a full-term normal infant on 25 August 1952. She continued to do well until late in October 1952, when she developed shortness of breath and wheezing accompanied by productive cough. Treatment with aminophyllin and adrenalin afforded only slight relief, and she was admitted to Walter Reed General Hospital on 2 November 1952.

Past history, family history, and the system review were unrevealing aside from the above stated findings.

She was well developed and obese, and in acute respiratory distress. The blood pressure was 118/78. The temperature was 100.8°F (oral). The pulse rate was 100 and the respiratory rate 26. She was coughing and raising copious amounts of thick mucopurulent sputum. There were universal wheezes on inspiration and expiration. The expiratory phase was markedly prolonged. Coarse and medium rales were heard throughout the chest. The heart sounds were difficult to hear because of the body build and the respiratory noises. P_2 equaled A_2. There were no murmurs. The cardiac borders could not be percussed. The rest of the physical examination was within normal limits.

The white blood cell count was 9,700 per cu. mm. with 50 per cent neutrophils, 24 per cent lymphocytes, 5 per cent monocytes, and 20 per cent eosinophiles. The red blood cell count was 4,500,000 per cu. mm., and the hemoglobin was 13.5 Gm. per cent. The sedimentation rate was 13 mm. per hour (Wintrobe). The serologic tests for syphilis were negative. Serum albumin was 3.7 Gm. and serum globulin 4.9 Gm. A chest X-ray film showed slight cardiomegaly and shaggy markings in the right cardiophrenic angle (figure 1). The electrocardiogram showed large T waves in all leads and inversion of the T waves in the AVL lead. Sputum cultures grew alpha streptococcus, which was sensitive to all antibiotics except streptomycin, and *Staphylococcus aureus*, which was resistant to the tetracyclines.

On admission the patient was placed in an oxygen tent and maintained on a regimen which included potassium iodide, antihistamines, aminophylline intravenously and by suppository, daily Adrenalin in oil, Demerol, and Sodium Amytal. The asthma became episodic, and the episodes became milder and less frequent. On the tenth hospital day she was taken off aminophylline. She was being considered for discharge on the thirteenth day, when suddenly, with no wheezing, she became dyspneic and apprehensive with a tachycardia of 130 per minute. Despite oxygen breathing by positive pressure, intracardiac adrenalin, and artificial respiration she expired 50 minutes later.

The body was that of a well-developed, obese colored woman of approximately the stated age, weighing 170 pounds and measuring 66 inches. The skin was entirely unremarkable. There were palpable, small lymph nodes in the axillary and cervical regions. The right lung weighed 575 Gm. and the left 500 Gm. Both lungs were essentially similar. The pleural surfaces were unremarkable. There was diminished crepitance throughout, especially conspicuous in the lower lobes. The cut surface was dark red and markedly congested, and on pressure exuded copious amounts of pink, frothy fluid. The bronchi were filled with blood-tinged thick, viscid, mucinous material. Similar material filled secondary bronchi and bronchioles. There were scattered emphysematous blebs throughout both upper lobes.

The heart weighed 400 Gm. It displayed right ventricular preponderance, and the epicardial surface showed small, round and discrete white plaques scattered over the right auricle and the left ventricle. There was moderate right ventricular dilatation. The right and left ventricular walls averaged 1.0 cm. in thickness. The valvular cusps and leaflets were smooth and pliable, and the circumferences were within normal limits. The coronary arteries were unremarkable. The major vessels showed no demonstrable abnormalities. The spleen weighed 200 Gm. It had numerous discrete, white capsular plaques measuring up to 0.2 cm. The cut surface was unremarkable. The liver weighed 1,730 Gm. It showed several discrete white capsular nodules of pinpoint size. The cut surface was essentially normal. Scattered within the mucosa of the stomach, small intestine and colon were small, gray-white nodules. These were similar to those previously described on visceral surfaces. They varied from pinpoint to 0.3 cm. in diameter.

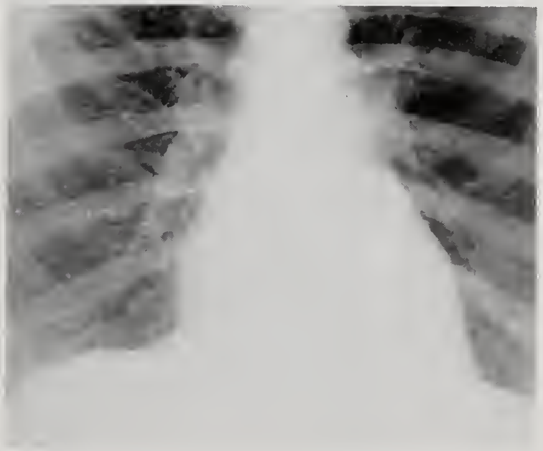

FIG. 1. November 1952—shaggy increased markings in right cardiophrenic angle.

Both kidneys were essentially similar. They were of average size, and the capsules stripped with ease, revealing several small subcapsular cortical nodules which were similar to those in other organs. The cut surface as well as the calyceal system was unremarkable. The remainder of the gross necropsy findings were essentially within normal limits.

Sections of both lungs showed an essentially similar picture. There was conspicuous pleural fibrous thick-

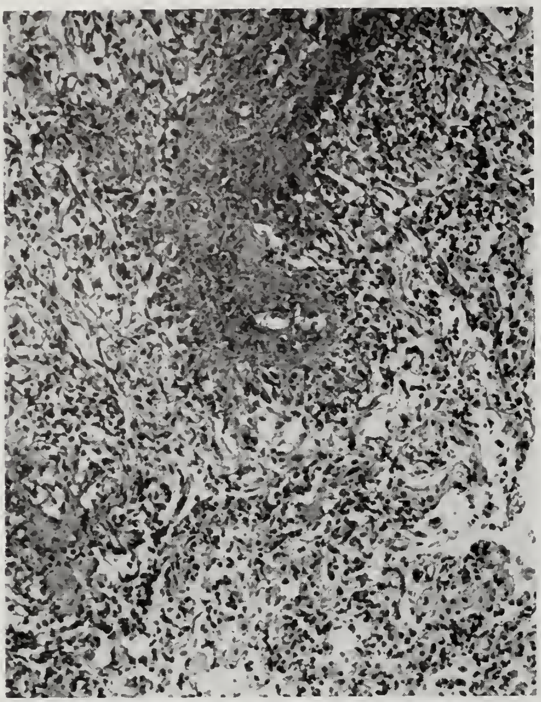

FIG. 2. Wall of pulmonary artery showing fibrinoid changes. Histiocytes and eosinophils surround the wall. The former show tendency to palisade about necrotizing wall. Note similarity to necrotizing vasculitis.

ening. Similar thickening involved the interlobular septa. The vascular bed was markedly congested. There was alveolar distention with frequent rupture of the alveolar walls. The bronchi and bronchioles contained intraluminal mucinous basophilic material. The bronchial lining epithelium showed foci of squamous metaplasia. The basement membranes were markedly thickened. The subepithelial reticular zone was thickened, vascularized and diffusely infiltrated with round inflammatory and eosinophilic polymorphonuclear cells. The bronchial musculature was markedly hypertrophied. Scattered within the lung, mainly in and about medium-sized veins and arteries, were numerous granulomatous lesions. These were composed of an irregular central area of smudgy, eosinophilic necrotic débris within which, in some instances, structural ghosts of vascular walls could be seen. This zone shaded into and bordered upon a surrounding zone of epithelioid histiocytic cells. The epithelioid cells frequently exhibited a tendency to palisade around the central necrotic zone. A third irregular outer zone was composed of eosinophilic and round inflammatory cell infiltrate strewn within a rather vascular stromal background. The eosinophilic cell infiltration also extended into the inner zones. In some areas adjacent granulomata became confluent. In other localities medium-sized blood vessels showed intimal proliferation and in some instances granulomatous lesions in various stages of development about their walls (figures 2, 3 and 4). There were no giant cells. Occasional vascular lesions which were indistinguishable from those of acute necrotizing vasculitis and periarteritis nodosa were also encountered. Periodic acid Schiff stains, Gram stains, and Gomori methenamine-silver stains revealed no demonstrable organisms.

Sections of the heart showed a thin epicardium. Within the mitral valve there was subendocardial focal and somewhat nodular fibrosis. The major coronary vessels were not abnormal. Scattered within the myocardium were small granulomata about twigs of coronary arteries which were similar to those described within the lung. In one locality within the right ventricle the granulomata became confluent and replaced a wide zone of myocardium (figure 5). The aorta showed moderate arteriosclerotic intimal thickening and focal zones of round and eosinophilic cell infiltrate about the vasa vasorum.

Within the spleen there was a moderate number of granulomata in various stages of development which were essentially similar to those previously described. There was moderate pericapsular fibrosis. The splenic pulp was densely infiltrated by eosinophilic leukocytes.

The bone marrow showed normal cellularity with marked increase in eosinophilic leukocytes. The lymph nodes showed vascular congestion and reactive germinal centers.

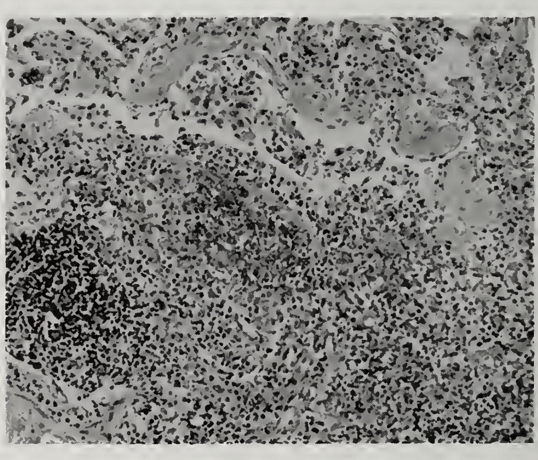

FIG. 3. Fully developed granuloma involving segment of wall of medium-sized pulmonary vein.

Sections of the grossly described nodular lesions within the bowel wall revealed necrotizing granulomata about blood vessels which were scattered within all layers of the wall. The liver showed necrotizing granulomata in and about blood vessels in the portal areas (figure 6).

Granulomata were seen under the capsule of the kidneys. They were similar to those previously described in the lungs. There were several foci of round, inflammatory cell infiltration about the tubules, within the medulla and cortex. The glomeruli showed slight increase in cellularity, congestion, an occasional mild exudation and glomerulo-capsular synechiae. The afferent arterioles showed proliferative vasculitis with an occasional focal necrosis in the wall. No lesions were encountered within the central nervous system. The joints were not examined.

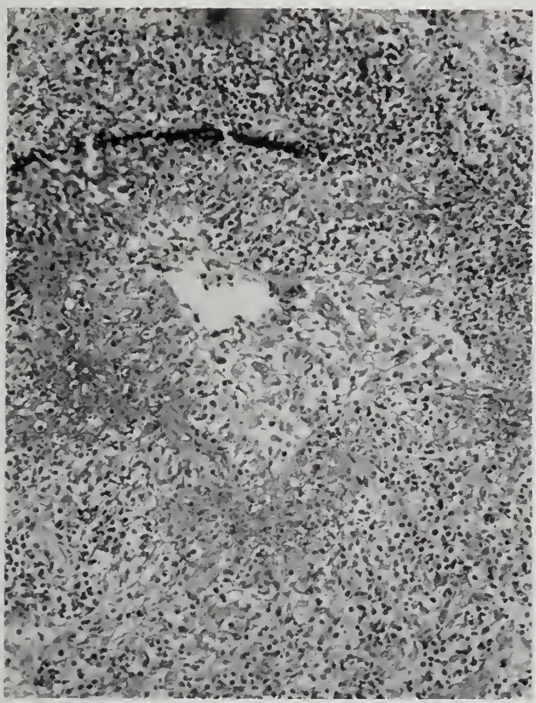

FIG. 4. Wall of partially occluded pulmonary artery extensively destroyed by granulomata. Note dark necrotic centers in vessel wall.

DISCUSSION

The case typifies classically the syndrome as it was described by Churg and Strauss.[1] Asthma developing in adult life with a course marked by remissions and relapses, pericardial effusion, eosinophilia, low-grade fever, death due to myocardial embarrassment, and the pathologic findings of disseminated visceral granulomata in and about medium-sized arteries and veins are characteristic features.

There were other clinical features in the cases of Churg and Strauss which were not encountered in this case. These included cutaneous and subcutaneous nodules, occasional joint symptoms, abdominal pain, and diarrhea, often bloody; skin manifestations such as purpura and erythematous maculopapular or pustular rash, and central and peripheral nerve injury. Renal manifestations were mild and were seen only in 3 of their cases. The average duration of the disease from the onset of symptoms to termination was 3 years.

Although not all of the clinical manifestations described by Churg and Strauss were seen in our

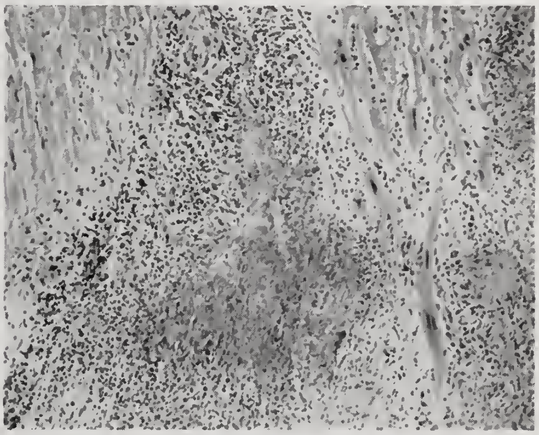

FIG. 5. Large area of myocardium replaced by necrotizing granulomata. Note "ghost" of coronary vessel within necrotic area.

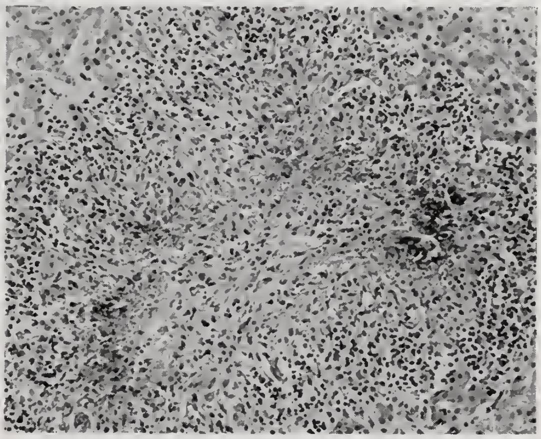

FIG. 6. Hepatic artery partially occluded and wall destroyed by fully developed granuloma. Note the 2 centers of necrosis.

case (neither were they present in all the cases of their series), nevertheless identical widespread pathologic processes were encountered in viscera which would have given rise to signs and symptoms had they been of sufficient magnitude.

The presence of necrotizing granulomata about blood vessels noted in this case is characteristic of the process as described by Churg and Strauss. Typically the process begins within vessel walls or within supporting connective tissue. Parenchymal involvement is not a primary feature. The lesion involves medium and small vessels and spares the large ones. In a few instances vascular lesions were indistinguishable from periarteritis nodosa and in others from acute necrotizing angiitis. Transitional vascular and perivascular interstitial lesions were also seen in which granuloma formation was seen in various stages of development. As the lesion advanced, central necrosis appeared. In the fully-developed granuloma there were 3 distinct zones—a central zone of necrosis, a middle zone of epithelioid cells sometimes palisading about the zone of necrosis, and an outer zone of eosinophiles and round inflammatory cells strewn in a vascular stromal background. It would appear that the fully-developed necrotizing granuloma begins either as a vasculitis, perivasculitis, or an interstitial reaction within the connective tissue.

Although all routine investigations thus far failed to reveal an etiologic agent, there is conclusive evidence which points to an altered immune response. Primary predilection of the lesions for vascular walls and supporting connective tissue supports such a view.[2] Also, the prodromal manifestation of "clinical asthma" in adult life combined with the presence of bronchial lesions indistinguishable from those of asthma suggests that an antibody-antigen reaction underlies the process. Like other mesenchymal diseases in which hypersensitivity is implicated, the process is responsive to influences of hormonal agencies. Thus, pregnancy was noted to induce a remission in the course of the disease in this case.

Experimental and clinical observations on the effects of hormonal agencies on the course of mesenchymal diseases and their influence on the metabolism of connective tissue ground substance (acid mucopolysaccharides), as well as the localization of the allergic insult within sites normally rich in acid mucopolysaccharides, have led to the concept that the mucopolysaccharides normally play a major role in body defense and that some such substances constitute the primary site of antibody concentration.[3] The mucopolysaccharides are vital structural components of the walls of blood vessels.[4] Placed between the circulation and the parenchyma they would be ideally suited as defense barriers against foreign agencies which cause mesenchymal diseases of allergic nature as well as infectious processes. Also, noxious blood-borne agents which cause disease could not do so unless they have penetrated such barriers. Undoubtedly, future studies that will attempt to seek an explanation for the empirical observation that allergic insults culminate in sites rich in acid mucopolysaccharides (blood vessels, heart valves, and joint synovia) would have to take into account the metabolism and physiognomy of such substances of which little is known. There also remains, unanswered, the question of how and why do various forms of allergic insults have predilection for, not only special localities but even special vascular channels of certain sizes and form. One may also raise the question of why an antibody-antigen reaction in the ground substance of one host is protective while a similar one in that of another host is injurious and detrimental.

It is beyond the scope of a report of this nature to dwell upon the pathogenesis of allergic insults and the effects of hormones upon the metabolism of connective tissue ground substance. Such have been the subject of several excellent reports.[2, 3, 5] Suffice it to say that the ground substance acid mucopolysaccharides and the enzymes which hydrolyze them are subject to regulation by hormonal agencies, and that such agencies also modify profoundly the reaction to allergic insults.

The disease ought to be more frequent than one is led to believe from paucity of reports. Could it be that frequent use of steroids in patients with "intractable asthma" modifies the course as well as alters the histogenesis? If this is so, why was it not described with more frequency prior to the steroid era?

Many case reports have described essentially the same syndrome as described by Churg and Strauss under various titles. A description of such cases can be found in reports by Bayley et al[6] in 1945, Smith[7] in 1948, and Zuelzer and Apt[8] in 1949. It is also likely that many of the cases reported under allergic granulomatosis belonged to this entity.[9-12]

In attempting to establish a syndrome as a distinct clinicopathologic entity one cannot conclude such a discussion without alluding to other conditions with which it shares common features. Review of the literature reveals various disease entities, allergic and nonallergic, which share some of the clinical and pathologic features, to some of which the broad term "eosinophilic granuloma" has been loosely applied.

Various parasitic diseases may mimic allergic granulomatosis clinically and, to a large extent, pathologically. Perhaps even similar mechanisms of response are at work. Organisms commonly involved may be *Ascaris lumbricoides*,[13] and *Toxocara canis* or *Cati*.[14] Clinically, similar syndromes are seen, often under the label of Löffler's pneumonia, anaphylactoid purpura with pulmonary manifestations, and sensitization by poison oak or ivy vaccines,[15] and drugs.[16, 17] Löfller's pneumonia is self-limited. Anaphylactoid purpura (acute necrotizing arteriolitis) with pulmonary involvement may be indistinguishable clinically from Churg-Strauss syndrome during the individual attack. The pathologic process is exclusively a necrotizing arteriolitis without granuloma formation and presents no diagnostic challenge. Clinically, profound gastrointestinal manifestations of an acute abdomen with bleeding into the gastrointestinal tract accompanied usually by renal manifestations of hematuria, proteinuria and hypertension of explosive onset point to anaphylactoid purpura. Purpuric or macular skin rash may appear early or late in the course and characteristically gravitates about joints over their extensor surfaces. The disease is usually self-limited and subsides with removal of the inciting agent (food or drug). It responds to steroid treatment. It has a course of remissions and episodic exacerbations of varying severity, and in many cases an attack terminates in 5 to 10 days with complete recovery. In some cases the process may linger for 3 or 4 weeks. Death, when it occurs, usually follows surgical intervention and resection of the "gangrenous" bowel loops, or within 4 weeks from onset in the unrecognized, untreated severe case. Thrombocytopenia is also a frequent manifestation of acute necrotizing arteriolitis.

Eosinophilic granuloma of the granulomatous, non-storage histiocytoses may sometimes be confused with allergic granulomatosis and inhalation granulomatous foreign-body pneumonitis. Eosinophilic granuloma of non-storage histiocytoses usually has a benign clinical course. It often presents solitary or multiple granulomatous lesions about medium-sized bronchi, and, when the process is extensive enough to give rise to pulmonary symptoms, the latter are usually those of pulmonary insufficiency and not asthma. Microscopically the lesion is composed of histiocytic cells lying loosely within a vascular stroma sprinkled with eosinophilic leukocytes. Necrosis may or may not be present. It does not involve vascular channels. We doubt the occurrence of such a lesion in the lung in the absence of bone involvement. All pulmonary eosinophilic granulomata of this designation which have been encountered by us in surgical material have been shown to have a simultaneous coexistent bone lesion of similar nature by radiologic bone survey and subsequent biopsy.

Finally, there is the syndrome known as Wegener's pathergic granulomatosis with strong similarities to the Churg-Strauss syndrome. Clinically Wegener's syndrome may begin as a necrotizing granuloma in the upper or lower respiratory tract, frequently within nasal passages. It is characterized by signs and symptoms of respiratory system inflammation (pneumonitis) when it involves the lungs; a varying remittant course eventuating into profound constitutional symptoms as multiple system involvement supervenes with many patients dying years later from renal failure.[18] Although isolated pathologic lesions of Wegener's granulomatosis and some of the clinical features may be shared by the Churg-Strauss syndrome, there are important differentiating features. For example, clinical asthma is not a feature of the symptom complex of Wegener's granulomatosis, a feature which distinguishes the Churg-Strauss syndrome. Anatomically there are large necrotizing pulmonary granulomata and disseminated vasculitis of the periarteritis, necrotizing and granulomatous types.[19] Giant-cell proliferation usually present in Wegener's granulomatosis is not seen in Churg-Strauss syndrome. Fienberg[20] has presented cases which advance plausible support for the theory that Wegener's granulomatosis may be the result of endogenously caused hypersensitivity following repeated tissue insult by the release of products of necrosis. While Wegener's syndrome may be distinguishable from the Churg-Strauss syndrome clinically and anatomically, so many basic features are shared by them that, eventually, they may be shown to be essentially the same process, at least as far as pathogenesis and histogenesis are concerned. Manifestations of altered immune responses represent the end products of complex series of reactions which are modified by the nature, quantity, and persistence of the inciting agent and the biologic response of the host. The case of Ehrlich and Romanoff[21] which can be classed in both of these syndromes clinically and anatomically suggests the closeness of these interrelationships.

SUMMARY

A case of the syndrome known as allergic granulomatosis of Churg and Strauss has been presented. The clinical features are asthma, fever and eosinophilia associated with disseminated necrotizing granulomatous vasculitis.

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Sjögren's Syndrome

Report of a Case

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SJÖGREN'S SYNDROME is characterized by keratoconjunctivitis, dryness of the mouth, and rheumatoid arthritis, any two of which are sufficient to make the diagnosis.[1] The etiology of this syndrome is unknown, and the condition is frequently associated with lupus erythematosus,[2, 3] scleroderma, periarteritis nodosa, and sarcoidosis.[4] Reports indicate that it occurs most frequently in postmenopausal women.

In addition to the arthritis there are dryness and inflammation of the eyes, nose, mouth, and throat, and painless enlargement of the salivary glands with decreased or absent salivary flow. A sialogram frequently discloses the presence of sialectasis, and the Schirmer technic[5] reveals decreased tear flow. The slit-lamp examination demonstrates keratoconjunctivitis, and abnormal staining of the bulbar conjunctiva and cornea is noted with rose bengal dye. The course is afebrile.

Chronic inflammation of the lacrimal and salivary glands may develop as a result of functional deficiency. Dryness of the skin may occur,[6] and dryness of the mucosa of the mouth, gastrointestinal tract, and tracheobronchial trees sometimes results in impairment of taste and smell and chronic cough.[7] Renal and pulmonary complications, as well as muscular weakness, pigmentation changes, muscle atrophy, splenomegaly, hepatomegaly, areflexia or hyporeflexia, alopecia, and purpura with easy bruising also occur.[8, 9] In 17 to 87 per cent of the documented cases rheumatoid arthritis has been present,[6] and, according to one source,[7] the larger joints are usually affected first, but this has not been a consistent finding.

Biopsies of the salivary glands in patients with this syndrome have shown marked round-cell infiltration composed of lymphoid elements, plasma cells and histiocytes, with reduction of acinar parenchyma and proliferation of duct epithelium. The round-cell infiltration has been noted perineurally and intraneurally as well as perivascularly. This is in contrast to the absence of intraneural and perineural infiltration in other forms of arteritis and periarteritis.[7]

Gastric achlorhydria has been reported in approximately 60 per cent of the cases.[5] McLenachan[6] studied 45 cases and presented evidence of liver dysfunction in the majority. He also noted the similarity of Sjögren's syndrome to vitamin A deficiency.

Certain serologic studies are helpful in making the diagnosis. Bloch and his associates[1] recently reported serologic findings on 21 patients. Hypergammaglobulinemia occurred in 71 per cent; the bentonite flocculation test was positive in 95 per cent; the sensitized sheep-cell agglutination test was positive in 90 per cent of the whole group and in 75 per cent of those without joint involvement; antinuclear antibody was present in 71 per cent; LE cells were present in 10 per cent; the direct Coomb's test was positive in 25 per cent; and thyroglobulin antibodies were found in 14 per cent. These authors concluded that patients with Sjögren's syndrome may be distinguished from patients with rheumatoid arthritis without Sjögren's syndrome by an unusually active immunologic response.

Report of Case

A 37-year-old Caucasian woman had intermittent right parotid swelling for 8 years prior to admission. Three years later intermittent swelling of the left parotid gland developed, accompanied by dryness of the eyes, with frequent purulent conjunctivitis. Usually only 1 parotid was involved at a time. The ocular dryness was controlled with methylcellulose drops. She also complained of dryness of the mouth.

This patient first noted joint symptoms approximately 6 years after the onset of the parotid swelling. Initially this consisted of swelling of the left wrist, with stiffness and pain on motion, which improved after 4 to 5 days with no sequelae. Thereafter, at intervals of 4 to 6 months she had a transient arthritis, usually in single, unilateral joints or in groups of joints, such as the knees, metacarpophalangeal joints, wrists, and both distal and proximal interphalangeal joints. This always resolved without damage. Only on 1 occasion were the joints symmetrically involved.

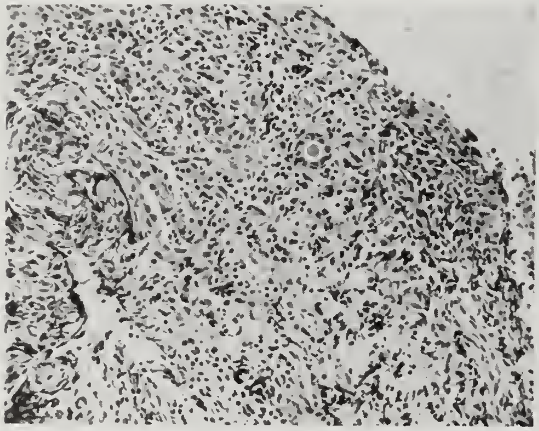

Fig. 1. Right parotid gland biopsy.

Six years prior to the onset of the parotid swelling the patient noted easy bruising, petechiae, postpartum hemorrhage, nosebleeds, and menorrhagia. Hematologic studies showed decreased platelets and prolonged bleeding time. A diagnosis of thrombocytopenia purpura was made at that time, and splenectomy resulted in symptomatic and laboratory improvement.

Eight months prior to admission specimens for biopsy were taken from the right parotid gland, which was enlarged, and a right supraclavicular lymph node. Parotid gland biopsy revealed obliteration of ductal structures with diffuse infiltration of small, mature lymphocytes, compatible with uveoparotitis or Sjögren's syndrome (figure 1). The lymph node biopsy revealed reactive hyperplasia.

Following biopsy of the right parotid gland the gland remained enlarged and became indurated. Examination at the time of admission showed diffuse, smooth, nontender enlargement of the right parotid gland (figure 2).

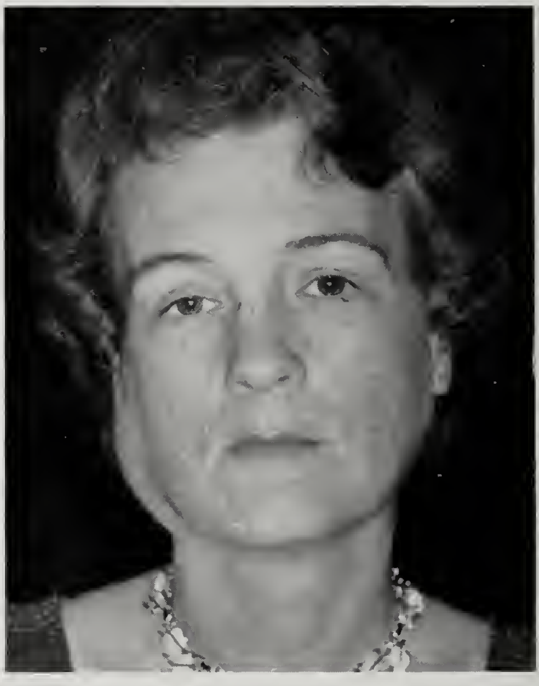

Fig. 2. Note diffuse, smooth enlargement of right parotid gland.

Sliding pressure over the gland produced a moderate salivary flow containing white, precipitated material. Stensen's duct was easily dilated to a distance of 5 cm. A polyethylene catheter was placed in the duct and

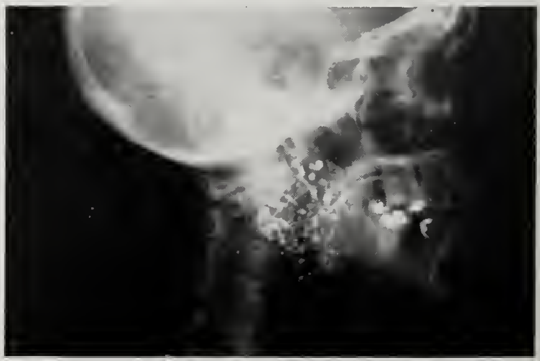

Fig. 3. Right sialogram showing sialectasis. Retained dye from previous sialogram present.

sutured in place for 7 days. The glandular swelling did not decrease during this period. A right sialogram revealed sialectasis without obstruction (figure 3). The left parotid gland was enlarged and firm posteriorly and obliterated the sulcus between the ramus of the mandible and the mastoid tip. Salivary flow was easily produced by sliding pressure over the gland.

Peripheral blood studies revealed the following: hemoglobin 11.1 grams per 100 ml.; hematocrit 35 per cent; white blood cell count 6,000 per cu. mm., with 67 per cent neutrophils and 23 per cent lymphocytes; corrected sedimentation rate 17 mm. per hour; platelet count 484,000 per cu. mm. Urinalysis was normal. Serum uric acid determination was 3.6 mg. Cardiolipin slide flocculation test was negative. Bentonite flocculation test was reactive to a titer of 1:256. Latex slide flocculation test was nonreactive. Complement fixation test for nucleoprotein antibody was negative. Antistreptolysin 0 titer was 100 units. C-reactive protein determination was negative. Protein electrophoresis revealed a normal curve and values, and cryoglobulins were not present.

X-ray films of the knees, skull, hips, and sacroiliac joints showed no evidence of arthritis.

The patient was treated with external radiation to the right parotid gland. The dose was 500 roentgens skin dose and 455 roentgens tumor dose, given in divided doses over a 15-day period. This resulted in marked softening and reduction in size of the right parotid mass and a good cosmetic result.

COMMENT

Sjögren's syndrome should be considered by the otolaryngologist in evaluating a patient with enlargement of the salivary glands. The differential diagnosis should also include uveoparotitis, Mikulicz's disease, chronic sialadenitis, chronic granulomatous diseases, and salivary gland neoplasms.

Uveoparotitis is characterized by fever, bilateral iridocyclitis, bilateral parotitis, and frequent facial paralysis which may be bilateral. Mikulicz's disease shows bilaterally symmetrical enlargement of all salivary glands as well as the lacrimal glands. It is considered by some to be a less highly developed variant of the larger symptom complex, Sjögren's syndrome.[10] Chronic inflammatory diseases are usually localized and without ocular symptoms. Calculi and strictures may often be demonstrated by secretory sialography. Chronic granulomatous diseases such as sarcoid, tuberculosis, syphilis, and actinomycosis may be excluded by skin tests, cultures, smears, and serologic studies. The possibility of neoplasm must be considered in all cases of persistent enlargement of the salivary glands, and biopsy must be performed in order to exclude them. It is important to remember that leukemia and other malignant lymphomas may be manifested by salivary gland enlargement. Hematologic studies, including bone marrow examination, aid in these diagnoses.

Since the pathogenesis has not been accurately determined, a variety of treatments has been attempted. These include the use of ACTH, cortisone, sympathectomy, vitamin therapy, estrogens, androgens, pituitary implants, and X-ray therapy. ACTH and cortisone have been beneficial in controlling arthritic symptoms, but the effect on parotid and lacrimal secretion has been equivocal.[5] In 4 patients reported by Denko and Bergenstal,[9] however, the combination of prednisone and desiccated thyroid produced striking results. Methylcellulose used as artificial tears has provided effective symptomatic relief for eye dryness. Steroids have been used locally, with some success, to temporarily relieve the dryness of the eyes by attenuating the conjunctival and pericorneal hyperemia.[11]

SUMMARY

Sjögren's syndrome is characterized by the triad of keratoconjunctivitis, dryness of the mouth, and rheumatoid arthritis. It should be included in the differential diagnosis of chronic, painless swelling of the salivary glands. The clinical, laboratory, and histologic findings of a representative case have been presented.

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(*Continued on page 708*)

Vascular Spiders Involving the Lower Extremities

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LT. COLONEL JACQUES L. SHERMAN, JR., M.C., U.S.A.
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IT IS COMMONLY BELIEVED that the vascular spider is rarely, if ever, found below the umbilicus. Eppinger[1] noted that vascular spiders occurred in the upper portion of the body and commented that in cases of hepatic disease he had never observed them in regions not drained by the superior vena cava. This observation was confirmed by Watson[2] in an article on regurgitation jaundice published in 1940. Since that time some observers have noted that vascular spiders do occur in regions other than those drained by the superior vena cava. Bean,[3] in his classic monograph, states, "Only after some time of painstaking search did I find spiders below the level of the umbilicus." His work was drawn from studies on more than 1,000 persons with vascular spiders, several thousand patients, and more than 2,000 "normal" persons. In patients with liver disease he found that 3 per cent of the spiders were found on the legs. In view of this rarity, it is somewhat fortuitous that we found 2 persons during the same week with spiders involving the lower extremities.

Report of Cases

Case 1. A 47-year-old white woman was evaluated for possible Cushing's syndrome because of obesity, plethora, equivocal hirsutism, purplish striae, edema, and amenorrhea. Her body habitus otherwise showed no characteristic stigmata of Cushing's syndrome or hepatic disease. Her obesity was not truncal and her blood pressure was normal. Spider angiomata over the back, right shoulder, right arm, and over the left ankle were incidentally noted during physical examination.

Laboratory studies, including a complete hemogram, liver function studies, blood sugar, and serum electrolytes were normal. Evaluation of adrenal function by means of 17-hydroxysteroids, 17-ketosteroids, and pregnanetriol excretion showed normal control values and normal levels following ACTH stimulation and suppression with dexamethasone.

The patient was considered to have simple exogenous obesity uncomplicated by significant organic disease.

Case 2. A 37-year-old white woman was admitted for treatment of advanced cirrhosis of the liver. In 1950 she had had a brief episode of jaundice compatible with acute viral hepatitis, and in 1959 she had hepatomegaly and palmar erythema. A liver biopsy in March 1960 showed findings compatible with postnecrotic cirrhosis. Over the subsequent 13 months she became progressively lethargic and anemic. At the time of admission her chief difficulties were extreme weakness, painful distention of the abdomen, and oliguria.

Physical examination showed a cachectic white woman whose vital signs were normal except for moderate tachypnea. Pertinent physical findings included ascites and a prominent venous pattern over the abdominal wall. A grossly nodular liver edge was palpable 10 cm. below the right costal margin. The extremities showed marked muscle wasting but no edema. Prominent pulsating spiders were present over the upper extremities, chest, shoulders, left knee, and right leg (figure 1). Neurologic examination showed a fine tremor and confusion.

Laboratory studies were characteristic of severe hepatic decompensation.

Discussion

Although more than 99 per cent of all vascular spiders occur in the area drained by the superior vena cava, their occasional appearance in the lower extremities should not be overlooked by the clinician in his physical examination.

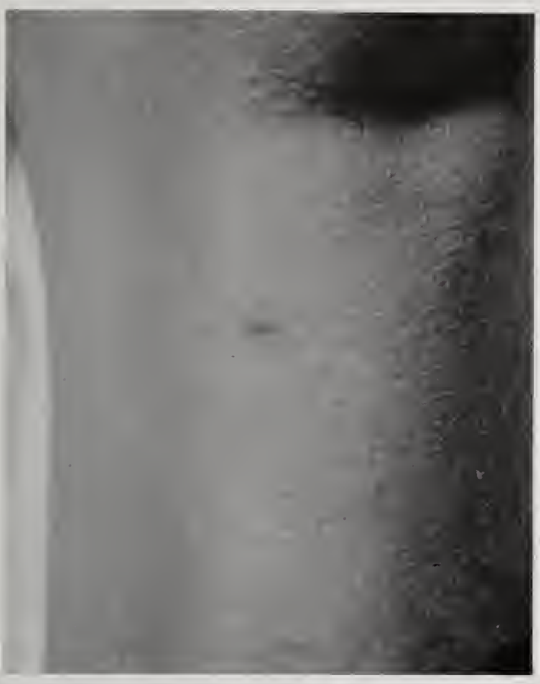

FIG. 1. Case 2. Spider nevus, right leg, in woman with hepatic decompensation.

Classically, vascular spiders occur in patients with liver disease, in women during normal pregnancy, and in normal individuals. In patients with liver disease it is generally true that the more severe the liver disease, the more frequent the occurrence of vascular spiders. It is also true that vascular spiders occur more frequently in patients who have chronic liver disease than in those with acute disease. Neither of these, however, can be considered to be a hard, fast rule for any individual patient. Spider angiomas serve in diagnostic importance by suggesting the presence of esophageal varices in those patients who have cirrhosis. Palmer[4] reported that patients with cirrhosis of the liver who have spiders show an incidence of esophageal varices twice as great as cirrhotic patients without spiders.

Bean's careful study of vascular spiders during the course of normal pregnancy show that they occur in 2 of 3 white women but only in 1 of 6 Negro women. The lesions often disappear postpartum and are not indicative of hepatic disease. It is of interest to note that among 634 lesions observed during pregnancy he found only 1 spider in the lower extremity.

It is perhaps most important to recognize that vascular spiders appear in from 10 to 15 per cent of normal individuals and that despite previous allegations this lesion bears no relationship to any known vitamin deficiency.[3]

Since vascular spiders have been demonstrated in the lower extremities in patients with liver disease, in normal and pregnant women, and in normal patients, there seems to be no evidence that this peculiar distribution is of any additional diagnostic significance.

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Crushed Chest Injury Treated with a Mechanical Ventilator

Report of a Case

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INSTABILITY OF THE THORACIC CAGE due to multiple rib fractures results in a decrease in ventilatory capacity. This, in turn, causes loss of an effective cough mechanism, inability to aerate the lungs fully, and, if instability is severe, inability to maintain adequate respiratory gas exchange. As a result, atelectasis, pneumonia, hypoxia, and hypercarbia may ensue. In the past the most common method of stabilizing the thoracic cage involved the use of soft tissue traction and sand bags applied to the chest.[1] In this manner ventilation was improved but was still less than normal. The use of a mechanical positive pressure ventilator in crushed chest injuries has also been reported.[2] The following represents another case in which this ventilator was used successfully.

REPORT OF CASE

The patient, a 65-year-old white woman, accidentally fell beneath a slowly moving automobile and the wheels rolled over her chest and legs. She was brought to Walter Reed General Hospital in shock and with multiple injuries to the chest and right knee.

Physical examination revealed a blood pressure of 80/60 and tachycardia. There was obvious trauma to the thorax, with tenderness anteriorly and posteriorly on both sides. Ventilation was apparently adequate, but the patient experienced severe pain on chest movement or when she coughed. There was also obvious dislocation of the right knee and a large abrasion over the left shoulder.

X-ray studies revealed fractures of the fifth through eleventh ribs bilaterally. There was also a fracture dislocation of the right knee and a fracture of the left scapula.

A venous cutdown was done, and dextran and whole blood were given for shock. The right leg was placed in traction, and the shoulder abrasion was dressed. The patient was then transferred to the Recovery Ward, where she was seen by members of the Orthopedic, Medical, Thoracic Surgery, and Anesthesia Services. Although the patient could maintain adequate respiratory gas exchange, respiration was painful and coughing almost intolerable. Respirations were shallow and rapid, and there was a small amount of paradoxical motion on the right side.

A tracheotomy was performed to facilitate removal of tracheal secretions. A Mörch positive pressure ventilator was then connected to the patient's airway via the tracheotomy tube. She protested at first, but after reassurance and mild sedation with secobarbital she was able to relax and allow the ventilator to breathe for her. In order to produce a slight respiratory alkalosis and thus diminish any desire to breathe spontaneously, the machine was set to deliver a respiratory minute volume estimated as slightly in excess of normal. Humidification of the inspired air was attempted with the use of water and a wetting agent. Further treatment consisted of frequent suctioning through the tracheotomy tube, prophylactic antibiotics, meperidine for relief of pain, electrolyte studies, and appropriate intravenous fluids as indicated.

For the first 7 days after admission the patient's respiratory exchange was constantly maintained with the ventilator. During this time she remained well adjusted to the therapy, even though she was fully conscious. Daily X-ray films of the chest consistently showed good aeration of the lungs with no atelectasis or pneumonitis. Serum bicarbonate levels during this time varied between 17.7 and 24.4 mEq./l, indicating the desired mild respiratory alkalosis.

On the seventh day of mechanical ventilation it was decided that the patient's thoracic cage had become stable enough for her to attempt spontaneous ventilation. Accordingly, the machine was turned off for 5 to

15 minutes each hour during the day. The following day severe respiratory distress developed due to obstruction of the trachea, and emergency bronchoscopy was necessary. At this time a large amount of inspissated secretions and granulation tissue was removed from the trachea just below the end of the tracheotomy tube. After this procedure the patient was able to breathe freely. It was thought at this time, as it had been prior to the obstructive episode, that respiratory assistance was no longer necessary, and the patient was allowed to breathe spontaneously. Meticulous tracheotomy care, however, was carried out.

The patient did well during the next 10 days, and, with general anesthesia, the knee dislocation was corrected surgically 18 days after admission. This was followed by a relatively uneventful convalescence, and the patient was discharged from the hospital on June 20, 1960, approximately 2½ months after admission.

Discussion

Normally the negative intrapleural pressure produced during inspiration by expansion of the thoracic cage causes an enlargement of the lung volume. When the normal rigidity of the thoracic cage is disturbed, however, this negative intrapleural pressure during inspiration causes a partial collapse of the injured thorax. This results in diminished expansion of the lungs, as well as pain as the broken rib ends rub together, which further limits the patient's ability to breathe. With positive pressure mechanical inflation of the lungs, the negative intrapleural pressure is replaced by a continuous, fluctuating positive pressure, and it is thus possible to expand the lungs during inspiration even to the point of hyperinflation. At the same time the overriding ends of the broken ribs tend to be pulled apart with each inspiration, so that the pain of breathing is greatly diminished. Hyperventilation also results in a reduction in blood carbon dioxide tension, thus decreasing respiratory center stimulation, so that the desire to breathe spontaneously is decreased or lost. Since spontaneous breathing is painful, the induced apnea is beneficial.

In the case reported, a Mörch ventilator was used.[2] Essentially, this is a large, ruggedly constructed piston which is capable of delivering a large volume of air to the patient with each stroke. The volume per stroke, as well as the strokes per minute, may be varied by the attending physician. Because it can deliver volumes of air up to 3,600 c.c. per stroke, an uncuffed tracheotomy tube with a large air leak around the tube may be used. Air is blown into the lungs via the tracheotomy tube with each stroke. Expiration is passive, with air escaping through the leak around the tube and out through the oropharynx. In this way a tightly fitting tube is avoided, and secretions are swept upward into the pharynx by the large air leak. Any mechanical ventilator which is capable of delivering a large volume of gas and is automatically cycled may be used in the same manner.

The only major difficulty encountered in this case was that of tracheal obstruction due to the presence of inspissated secretions and granulation tissue directly beneath the end of the tracheotomy tube. In spite of humidification, the high air flows produced by this method tend to dry out secretions, and unless more than the usual tracheotomy care is exercised, a tracheal cast of dried secretions can form and may be disastrous. Therefore, tracheotomy care must be meticulous and suctioning frequent and thorough.

Summary

A case of a crushed chest injury successfully treated by continuous positive pressure mechanical ventilation for 7 days has been reported. Rationale of treatment and 1 complication have been discussed.

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PRESIDENT'S PAGE

RELIGIO MEDICI

THANKSGIVING—1961

THE LIGHT OF THE SUN no less than that of the stars is made of many parts, few of which are visible to human eyes. Likewise, the variegated darkness which surrounds humanity may not all be dispelled by pure reason. As long as there are more things to know (and there are so many!), the mind of man is insufficient without heart to match it.

The purest scientist, in humility recognizing something of the extent of unconquered fields, must have faith to transmute his knowledge into wisdom and he must have charity for a brother who likewise seeks to bridge great gaps of ignorance.

These needs become greater as the advancing science of medicine encroaches more and more upon the art. The growing complexities of medical technology with the multiplicity of nameless faces below the physician level augment the requirements for the physician-humanitarian in the halls of healing. There is much talk of wonder drugs and marvelous technics but little reference to miracle men who use them.

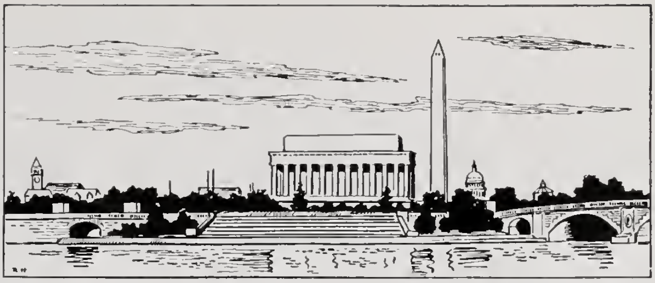
All these things argue for a broad and basic feeling for religion as an essential part of good medicine. The degree of acceptance of the restrictive dogma of a given organized faith is part of the personal right of any doctor. But the need to have a reverential attitude toward the life they seek to save and improve is the duty of all doctors.

Only by subscribing to a personal form of suprasectarian faith can a doctor make a sometimes agonizing decision to discontinue heroic and extraordinary measures to preserve a hopeless life. Yet it is the inescapable duty of the good physician at the right time to let his patient gracefully greet death himself as a friend without the unfeeling distraction of painful, artificial preservation of life.

Again, the broadly religious attitude is needful for us to join even in spirit the happily increasing numbers of our colleagues who are doing one of the finest and most hopeful jobs of these times of human peril in giving so much of themselves under the far-flung banners of MEDICO and of HOPE in the relief of human suffering everywhere.

Because all men seek the light, and because the religion of healing shines so brightly, let us this day give thanks that so much of it is in our keeping.

Donald Stubbs



EDITORIALS

DOCTORS' DISASTER ORDERS

The prospect of a civic catastrophe is always before us. One needs only to read of the jet airliner crashes, floods, hurricanes, and bus collisions to realize the importance of realistic disaster preparations by the medical profession. Over and above these considerations looms the ominous threat of enemy action against us with unprecedented medical casualties. The Committee on Emergency Medical Service has prepared the following orders for physicians in the Metropolitan Area to be carried out under conditions of local disaster or enemy attack.

DISASTER ORDERS

LOCAL DISASTER: Go to disaster scene, take charge if first doctor there. Do not go to hospital unless called. Casualty treatment stations (supplies for 50 patients each):

NORTHWEST

Police Precinct #6
  1300 Nicholson St.
Police Precinct #7
  3218 Volta Place
Bancroft School
  18th & Newton Sts.
Bruce School
  Kenyon St. & Sherman Ave.
Coolidge High School
  5th & Tuckerman Sts.
Eaton School
  34th & Lowell Sts.
Roosevelt High School
  13th & Upshur Sts.
Weather Bureau Annex
  1115–18th St.

NORTHEAST

Providence Hospital
  12th & Varnum Sts.
Gallaudet College
  7th St. & Florida Ave.
Young School
  24th St. & Benning Rd.

SOUTHEAST

Sousa Junior High School
  37th St. & Ely Place
St. Elizabeths Hospital
  Congress Heights

SOUTHWEST

GSA—Room B 94
  7th & D Sts.
D. C. Village
  Blue Plains, D. C.

VIRGINIA

Washington National Airport
Pentagon
  (Railroad Tunnel Storeroom,
  Rooms 1-A-331, 1-E-356)

ENEMY ATTACK: WARNING: 3–5 minutes steady siren.
TAKE COVER: 3–5 minutes intermittent siren.

If evacuating city take food, water and medical bag and leave by designated evacuation route. Report to any medical facility outside 20-mile distance.

The above directions will be enclosed with the 1962 membership cards.

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia

For several years the Society through the Committee on Emergency Medical Service has provided a nucleus of 40 physicians, known as the Medical Emergency Disaster Service (MEDS), who are equipped with medical supplies and trained in disaster medicine. At a disaster scene the MEDS physician properly may accept medical responsibility from other physicians with their consent, or may initially undertake medical disaster responsibility. In view of the local and international situation the Committee on Emergency Medical Service thinks that all Society members should receive disaster instructions and information so that they may best serve the community in times of crisis.

Let us consider first the physician's action in a civic disaster. The orders direct him to go to the disaster scene and take medical charge if he is the first physician to arrive. This statement imposes on the first physician the responsibility of medical leadership in estimating the casualty situation and initiating triage or sorting of the casualties into treatment priority. The directions further forbid the doctor going to his local hospital unless called by the hospital. Local hospitals already have disaster plans which provide for calling in physicians and other medical personnel as needed. For physicians and other personnel to report when they are not needed produces confusion and waste of medical manpower. Physicians arriving at a disaster scene in excess of requirements should be released by the physician in charge.

Following immediately after these initial instructions there is a list of all the locations of casualty treatment stations within the Metropolitan Area. The casualty treatment stations are provided and equipped by the combined efforts of the Washington, D. C. Civil Defense organization and the D. C. Health Department. There are enough medical equipment and supplies in each of these casualty stations to provide initial care for 50 casualties. There are 4 boxes plus some unboxed items, such as 50 cots and paper blankets. Included are antiseptics, surgical and bandage scissors, forceps, needles, needle holders, scrub equipment, assorted dressings, bandages, adhesive plasters, surgical sponges, procaine, and administrative items such as identification tags and pencils. Should a physician arrive at a local disaster scene and finy casualties numerous enough and seriousld enough injured that they cannot be moved even by ambulance without some initial care or resuscitation, he can, by knowing locations of the casualty treatment stations, set up an effective triage point. The list includes the Metropolitan schools, Health Department facilities, 2 Police Precinct Headquarters, the Washington National Airport, and the Pentagon.

A physician is relieved from duty in a local disaster when the victims are evacuated or their care is assumed by private physicians. The Committee on Emergency Medical Care believes that the authority of the first physician on the scene must be firmly asserted and unquestioned until he is properly relieved.

When enemy attack is imminent, or during an actual enemy attack, further instructions are provided. The warning and take cover signals are stated. If the city is evacuated the physician should take water, food packet, and his medical bag, leaving by the designated evacuation route. In this connection it would be wise to advise the physician not to attempt to reach home and then depart. His family should be separately instructed to take action immediately and independently of the physician, arriving later at a predesignated point. The time spent searching for one's family while the family waits somewhere may sacrifice all members of the family needlessly. After the physician has cleared a distance of approximately 20 or more miles from the city he should report to any medical facility for duty. Again the same principles obtain as in a local disaster. If a physician is the first to arrive at a medical facility he should at once organize the reception of casualties and their initial sorting and care, continuing to remain in medical command until he is relieved by higher authority.

Private physicians must recognize that under most local disaster conditions, and certainly under enemy attack, there will be no medical resources available to the civilian population other than the private physician. Civil Defense, Military, Public Health and other physicians with Government designations may be completely occupied and unable to render any civilian care. It is the duty of the private physician to make preparations now for effective disaster medical care.

James E. Chapman, M.D.
Chairman, Committee on Emergency Medical Service of the Washington Metropolitan Area

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BOTH SIDES OF THE COIN OF WISDOM*

Ethics and morality are synonomous in the dictionary definitions and are dealt with more expansively under the latter. Edwards' dictionary of thought from master minds over the past 4,000 years lists some 49 quotations from as many thinkers. The striking thing about these passages is that two-thirds of these men singularly point out that morality cannot be separated from religion. Listen to Voltaire, "All sects are different because they come from man, morality is everywhere the same, because it comes from God." And Washington, "Let us with caution indulge in the supposition that morality can be maintained without religion. Reason and experience both forbid us to expect that (national) morality can prevail in exclusion of religious principle."

I find a tendency in myself as well as others to be awkward and hesitant in discussing such noble words openly.

Recently I read an article by Max Eastman pointing out a vital thing lacking in Plato's teaching. The great Greek philosopher's times were much like our own. His people were tired of wars, disillusioned with revolutions, skeptical of the old forms of faith, groping for a hold on the real values of life. Plato through Socrates supplied an answer by initiating the objective science of psychology, which taught that our conscious life is divided into 3 parts: a sensuous part composed of appetites and passions, a restive part, which may be called will or "spirit," and a thinking part which he called reason. He deduced that not only is the good act the reasonable one but the good man is the man in whom reason rules. The spirit enforces the dictates of reason. The appetites and passion should obey. Virtue is when each part performs a natural function and vice is when this natural order breaks down.

The vital ingredient lacking in this intellectual philosophy was not added until 450 years later, when Christ taught that the good man is ruled not by reason but by a passion—that of love for his fellow men. Plato never wrote of this sympathy of one man for another, a sympathy of each man for the whole population.

Is not this what the great thinkers were saying when they could not write of morality without religion? And is not this the basic expression of the physician in his motivation to relieve suffering and cure disease?

Last year I had the privilege of attending The Oak Ridge Institute of Nuclear Studies for a month. Two weeks of this course were spent in the fundamentals of nuclear physics, one of the most advanced sciences known today. Perhaps the high point in this course was an afternoon's lecture on "The Origin of the Universe" given by the Director of the Institute, Dr. William G. Pollard. The entire class of scientists from many countries of the world sat spellbound by the objective reasoning and factual knowledge of this great physicist as he developed the theory of the expansion of the universe. Our own solar system became a tiny dot in spiraling nebulae trailing into the infinite.

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* Portion of an address made before the Freshman Class of George Washington University School of Medicine, September 19, 1961.

Engrossed by the disciplined mind of this great scientist, I was startled after the lecture to learn that in 1952 he had also become an ordained minister in the Episcopal Church. Furthermore, he had written a book, published in 1958, entitled "Chance and Providence." In reading this book I found for the first time in my own experience a man who can see both sides of the same coin, or, as Dr. Pollard writes, "two images of the same reality." The last chapter of this book is the development of an answer to the question, "How can the man who, enmeshed in the scientific thought forms of his age, sees nothing beyond chance and accident in the shaping of events be enabled to escape from his intellectual prison and helped over the barrier to the point where he is able to think Biblically about the same phenomenon?"

There is no actual conflict between science and religion. True reality can only be obtained through experience of both. It is in the realm of the latter that we speak of humility, trust and greatness. "Providence replaces the proud arrogance of achievement with the trusting humility of greatness," writes Dr. Pollard. And further, "Science as a human activity is a warm thrilling adventure with a deep sense of meaning and fulfillment about it. The typical scientist is a person of great humility and humanity with a profound sense of being called to his task with an inner conviction that it was meant for him, and he for it. Even though he may have lost all direct association with the Judeo-Christian heritage, he has enough vestigial reminiscence of its sense of providence left in him to know that this is what he is meant for and that in it lies his fulfillment.

"Things happen to this type man, but he does not simply let them happen; he awaits them expectantly and welcomes them when they come. He is not out to upset or change the world, but he rejoices in wonder and gratitude at the changes in it which come through him. You can tell by the joy that lives within him, and the absence of the strains and tensions and anxieties which mark those who must always be intervening in order that things may come out according to some plan. You can tell him too by his utter realism."

I believe you will agree with me that Dr. Pollard has expressed some principles basic to medical ethics. It is true that such things are more often "caught" than "taught" in your professional training. However, I urge you to consider moral character each day in your pursuit of knowledge, and, with the development of both sides of the coin of wisdom, success will be yours.

Howard Pierpont, M.D.
Associate Professor of Surgery, George Washington University School of Medicine

HEALTH EVALUATION TESTS AT THE AMA

The medical history and physical and radiographic examinations have been, historically, the standard components of the periodic health evaluation. To this was added a decade or two ago the electrocardiogram. This package type of evaluation has been offered for a number of years to physicians attending the annual meeting of the American Medical Association.

At the recent meeting of the AMA a new dimension was added to the health evaluation—the importance of clinical pathology tests was emphasized.

The idea is not new, of course. Thoughtful physicians have for some years added a urinalysis, blood sugar and cholesterol, and perhaps even a few additional studies to their standard periodic health examination. But 1961 was the first year in which a battery of laboratory tests was planned specifically for detecting incipient disease in the physician group. The tests were performed in a glass-panelled exhibit laboratory set up in the Coliseum building adjacent to the area devoted to physical examinations, X-rays and electrocardiograms.

Credit for the laboratory goes to the Section on Pathology and Physiology of the AMA and to several of the national societies in the field of clinical pathology. The pathologists selected the tests to be performed in the hope of "detecting derangements of metabolism before they have progressed to the stage of demonstrable tissue change, while the disturbance is, at least in some instances, reversible."[1] Fourteen tests were done on each physician who registered for the examination. These were as follows:

Blood chemistries—glucose, cholesterol, uric acid, transaminase, urea nitrogen, alkaline and acid phosphatase.
Hematology—microhematocrit, sedimentation rate, leukocyte count.
Urinalysis—protein, glucose, bilirubin, occult blood.

Problems presented in planning the laboratory were unique. The floor area of the laboratory was used for an entirely different purpose the previous week, hence the laboratory had to be built from scratch beginning on Wednesday and to be ready for operation on Sunday, 4 days later. In this period of time the glass-panelled walls had to be set up, laboratory work benches and counters fitted in position, equipment, supplies and materials assembled, placed and tested, and personnel trained. Then, within 48 hours after the last blood was collected during the busy 5 days of operation the laboratory had to be completely dismantled so that the area could be readied for the next "show."

Although there was no way of guessing how many doctors would present themselves to be tested, plans had to be made to accommodate numbers greater than those encountered in any previous experience. Venipunctures had to be made, using technics acceptable to physicians, collecting 2 blood specimens on every doctor, 1 with anticoagulant for hematologic procedures and another without anticoagulant for blood chemical studies. Urine samples had to be collected in privacy in an area not only having no toilets, but having no fixed plumbing installations of any type.

In order to handle the large number of specimens a "batch system" of operation was devised. Batch test-tube racks were designed to permit the identification of each specimen by position rather than by an affixed label. A batch report was worked out that made it unnecessary to work with separate report sheets. Test results on each doctor were assembled from 4 work areas without once copying a name or a test result. Presterilized tubes and needles were used for blood collection, and disposable materials were used for all tests, making glassware washing unnecessary. Automatic testing equipment was used wherever feasible, to speed operations and promote accuracy.

Six technical supervisors from the Washington area were selected, and each was indoctrinated in a special phase of the project. In New York these 6 supervisors set up their individual portions of the assembly line and trained the 22 registered medical technologists, who had been selected in the New York City area.

The pathologists recognized that under such circumstances there might be some question of the accuracy of test performance. To answer this question 2 controls, selected from a group of available controls of known value, were placed in each batch of test samples. The technologists testing the batch did not know which controls were in the batch, nor which tubes in the batch were controls and which were test samples. Analysis of test results on these controls gave proof of the validity of test performance.

Once in operation, after nearly 2 years of planning and development, the laboratory func-

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[1] From the anonymous brochure, "Clinical Pathology Tests in Health Evaluation," prepared for distribution at the exhibit.

DR. HOLDEN CONFIRMED AS REAR ADMIRAL

On September 1 the Senate of the United States confirmed the promotion of DR. RAYMOND T. HOLDEN to the rank of Rear Admiral in the Inactive Naval Reserve Medical Corps.

tioned with hardly a hitch. A line of physicians formed each morning before the laboratory opened, and a line was still present when the laboratory closed each afternoon. In all, 1,971 physicians underwent the series of tests. On Monday of this busy week, 485 persons came through, more than one a minute.

The results of each day's tests were ready for pick-up the following day although 1 of the units of the laboratory had to work straight through the night to make this possible. Pathologists on duty outside the laboratory answered questions about the significance of the results of the tests and explained the operation of the various units of the laboratory as seen through the transparent panels.

Analyses based on the operation of the laboratory should provide material for several interesting reports. Both clinical and laboratory studies will be possible. Correlation of the clinical history and the laboratory findings on each doctor should permit the evaluation of many factors such as the influence of body build, of daily alcoholic intake, and of family history upon blood chemistry. Study of test results in the laboratory should establish the significance and value of the different tests in health evaluation.

The American Medical Association has invited the pathology societies to put on their educational exhibit at the 1962 meeting of the AMA, and the pathology societies have indicated their willingness to do so.

Several years of this project should prove once and for all the importance of clinical pathology tests in health evaluation. Meantime the laboratory should provide a useful proving ground for mass-testing technics, an interesting scientific exhibit, and a valuable service to individual physicians.

T. M. P.

Membership

The following applicants for membership were duly elected to membership by the Executive Board, September 25, 1961, in accord with Chapter II, Article VIII, of the Constitution and By-laws of the Society.

Active Members

Charles M. Cabaniss, 28 Girard Street, N.E.
Carlena Lee Campbell, 2025 Eye Street, N.W.
Bernard L. Doll, 3502 Whitehaven Parkway, N.W.
George J. Ellis, Jr., 1620 Underwood Street, N.W.
John T. Hagenbucher, 915 19th Street, N.W.
Stanford A. Lavine, 110 Irving Street, N.W.
Raymond Scalettar, Walter Reed General Hospital

Associate Member

Irvin J. Cohen. Veterans Administration

THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

IN & OUT OF FOCUS

By the Observer

Our Public Image

Frequently over the past several years troubles which plague the medical profession have been aired in this column. On more than one occasion it has been stated that physicians have become so disturbed by the sometimes violent criticism of the American Medical Association, to which most physicians belong, that they have been alternately discouraged and angered.

Some weeks before this was written your Observer had occasion to discuss this situation with two physicians for whom he holds the highest regard. One said, "I am hurt by the unfair criticism leveled at our profession. I couldn't conscientiously recommend that my son become a doctor." The other deplored the distorted picture which the public has of the doctor. He said with considerable feeling that if the true image of the physician in 1961 were publicized it would do much to restore his prestige.

Your Observer countered with two observations. The first was that each of the physicians with whom he was speaking was successful. They both enjoy the confidence, respect and affection of a large number of patients. This is equally true of thousands of other doctors throughout the country. The second was that the American Medical Association, whether they approved of it or not, was engaged in a bitter controversy over methods of providing medical care. In view of this, there was bound to be criticism of the Association, much of it unfair. He also pointed out, as he has on many occasions, that the area of controversy was limited to a small segment of the AMA's activities. Nevertheless, in the public mind it overshadowed the Assocation's many good works. Finally, that our Society represents a minority group in the AMA which is of the opinion that even in the controversial area much criticism may be avoided by vigorous constructive action. (See "A Hollow Victory?"—In and Out of Focus, October MEDICAL ANNALS, page 624.)

Admittedly, there is much to be said for the views of these doctors, and your Observer is quite certain that there is a large number of their colleagues who feel as they do. However, the fact is that until the controversy between the AMA and those who oppose their views is finally disposed of one way or another there will continue to be what many doctors call "bad publicity." At this point your Observer would again like to make the observation that, contrary to the general impression among physicians, most of the so-called publicity is good. All that one has to do to satisfy himself on this score is to follow medical news in the press for a month or two.

Last month your Observer reviewed the findings of the Medical Disciplinary Committee and its report to the AMA House of Delegates and the Board of Trustees. The Committee called attention to some of the things which tarnish the public image of the medical profession and what should be done about them. It had some harsh words for unethical physicians and the harm they have done their profession.

On the encouraging side, a survey by the Public Health Service, reported in *Health Statistics from the U. S. National Health Survey* for July 1961, supports the conclusion that doctors are in greater public favor than even the medical profession is aware.

Here are some of the findings:

- Eighty-one per cent of those canvassed were entirely satisfied with their treatment by physicians.
- Seventy-eight per cent said they never had had an experience with a physician which would contribute to the loss of confidence in him.
- Forty-eight per cent said physicians generally showed more or a little more interest in their patients than their colleagues of 30 years ago.
- Forty-five per cent rated their own doctor higher than others—46 per cent thought him average.
- Forty-one per cent were critical because doctors did not give them a chance to relate their troubles.
- Fifty-five per cent were critical because appointments were not properly handled.

Physicians inclined to be pessimistic about the future of their profession should find the above findings, even though in part critical, a boost to their morale. They might also reflect on the fact that the medical profession is not the only group which is at present encountering difficulties. In many other fields of endeavor one hears about problems that seem insurmountable.

All in all, from the evidence available one can only conclude that the medical profession still stands near the top in public estimation.

Narcotic Records

A caller at the Society's Executive Offices at the time this column was being written was an enforcement officer from the Narcotic Squad of the Washington Metropolitan Police Department. The purpose of his visit was to direct attention to the new regulations with respect to physicians' narcotic records, which became effective on September 1, 1961. He urged that physicians be apprised of the required records so as to avoid unnecessary difficulties.

He surprised your Observer by stating that he had called on 15 to 20 physicians—he could not recall the exact number—who had no narcotic records whatsoever. Needless to say, these physicians are courting prosecution under the law. Your Observer promised that the required narcotic records would be publicized in the MEDICAL ANNALS.

Regulations on this point read:

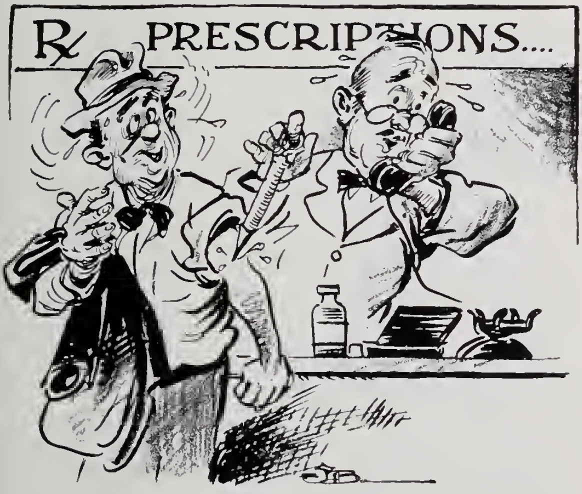
> "In the cases of physicians, dentists, veterinarians and other persons who are authorized to administer or professionally use narcotic drugs, the record book of narcotic drugs administered, dispensed or otherwise disposed of shall show the name of the authorized person and his Federal narcotic registry number on the top of the first page at least. All pages shall be divided into 5 columns which shall be entitled at the top of each page as 'date,' 'name of patient,' 'address of patient,' 'kind of drug,' and 'quantity,' respectively, and each column shall be of sufficient width to permit legible insertion of the appropriate information for a single transaction on a single line within the column. Such form will appear substantially as follows:

Dr. Reg. No.

Date	Name of Patient	Address of Patient	Kind of Drug	Quantity

. . . The column headed 'name of patient' shall be used to record whether the solution or other preparation was purchased or made up by the person required to keep the record, and the character of the solution or other preparation may extend across the two columns headed 'address of patient' and 'kind of drug.' "

The enforcement officer complained that even where doctors kept records their writing was often illegible. He asked, therefore, that the need for legibility be stressed. He also requested that physicians be reminded that they are placing pharmacists in jeopardy when they insist that prescriptions for narcotics, except in circumstances permitted by the law, be accepted by telephone. He cited incidents where the pharmacists had found themselves in serious legal difficulties because they had given in to the insistent demands of physicians that they proceed to fill prescriptions immediately with the promise that the signed authorization would follow.



"Doctor! . . . I hope I'm doing the right thing!"

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" . . . Trained to be Mice . . ." Why are polio, rabies, diphtheria, venereal diseases and other infectious diseases that can be controlled still rampant? Public health officers, writes Leonard Engel in the September issue of *Harper's Magazine*, are fearful of telling the public "bluntly" that it takes strong measures, including the "power of the law," to effectively combat these diseases. He quotes "a senior official" of the New York State Health Department as saying, "Public-health workers are all trained to be mice. In almost all health departments and most schools of public health, the emphasis is on avoiding controversy."

He states that public health officers are content with health educational programs and "bigger and bigger voluntary health campaigns." He admits their accomplishments are considerable but that "voluntary efforts cannot be depended on to eradicate such diseases as polio in a reasonable length of time."

> ". . . In Denmark, for example, where over 93 per cent of the youngsters under 19 and 85 per cent of the adults between 20 and 39 have been immunized with Salk vaccine, there are now only 10 to 65 polio cases a year.
>
> "In the United States, on the other hand, we have not been able to persuade enough persons of polio-susceptible ages to accept vaccination to bring polio under real control. Unhappily, a sizable segment of our population does not read newspapers or look at TV. Others read and are indifferent, and some have too little education for understanding. A considerable number have been kept away by the difficulty of obtaining polio shots in many parts of the country without paying a physician's fee. At any rate, we still have 2 to 6 thousand cases of paralytic polio a year because we still have nearly 30 million children and young adults who have had no polio shots (and over 10 million who have had only 1 or 2 of the required 3). Moreover, the unimmunized and underimmunized 40 million are not distributed uniformly throughout our population. This is why explosive outbreaks have occurred, for instance, in Chicago and Detroit in recent years."

The solution, he concludes, is not difficult. It could be remedied by giving "free polio shots to those who cannot pay and making immunization against polio compulsory." Public health officials, he reiterates, have been "extremely reluctant to press for mandatory health legislation."

He gives as an example the Public Health Service's endorsement of fluoridation and its position that legislation is not in its sphere. Such matters, it maintains, must be left to the states. As evidence of the untenability of the Service's position, he lists regulations on the statute books empowering Federal health officers to shut down interstate transportation to halt the spread of epidemics; power to compel vaccination of anyone entering the country from areas with diseases like smallpox and yellow fever; and laws which require restaurants and food stores to observe rules of cleanliness.

The author concludes by saying, "Hopefully, it may not be necessary to resort to outright compulsion to bring communicable diseases under proper control. We may merely need to make sure that we reach all the people who have no real objection to immunization, but who need prodding. However, even if compulsory universal immunization should prove necessary, no individual rights would be violated. For no one has an inherent right to refuse medical treatment designed to prevent the spread of infectious disease. . . ."

The health official with whom your Observer discussed this article objected strongly to the statement of the New York State Health Department officer who was quoted as saying, "In recent years we have all been taught to avoid controversy at almost any cost." He says this statement, in his opinion, is not true of health officers in most communities with which he is familiar.

Speaking for himself, he directed attention to the progress which has been made by his department in the prevention of polio and other diseases listed by the author. He says much credit must go to voluntary agencies and private physicians who have given their wholehearted coöperation.

He admits the situation could be improved but points to the difficulty of obtaining the necessary public funds. He has vigorously endeavored to obtain additional financial assistance, and in this he has had the support of his medical society. The specter of so-called socialism has never been a deterrent. As to the education of the public in regard to the protection of their health, he says this is a vitally important and never-ending task.

★

College Seniors Reject Medical Career

Although the widely publicized study of seniors at Harvard College who abandoned plans for a medical career is not conclusive, it is of more than passing interest. Dr. Daniel H. Funkenstein, Department of Psychiatry, Harvard Medical School, whose report on the study appears in *The Journal of Medical Education* for August, admits that "a definitive national study is needed to determine the factors lying behind the fall in the number and caliber of medical school applicants," but, he states, "such a study cannot be completed in a short time." In the meantime it seemed to him important that the findings at one college with a large number of premedical students might give some indication of a trend.

Dr. Funkenstein observes that medicine still holds the "top spot" as a desirable career among secondary school seniors and their parents. However, it is another matter among Harvard College seniors. From among 62 students in "good standing" who signified their intention of attending medical school at the time of their matriculation 4 years previously, 50 were chosen by "random numbers." A letter was written to each of them inviting him to come for an interview by a member of the medical school admission committee. Purpose: to review their plans to enter upon a medical career. Forty-six responded and were interviewed individually.

Among the factors discussed where the student had decided not to pursue a medical career were finances, length of medical education, the image of the physician, place of residence, parental occupation, and type of secondary school attended, i.e., whether private or public.

Two of the 46 students were eliminated from the statistical analysis data since they never had taken any premedical subjects and their choice of a medical career had only been temporary. Thus, the results are based on 44 students, 27 per cent of whom were receiving scholarship aid from the college or from some national organization. When asked, all of these students stated that financial considerations did not play an important part in their decision not to go to medical school. Most said they had been able to finance themselves through Harvard College and could do so in medical school.

Neither was the length of medical education a deterrent. Science grades, however, were a factor. Eighteen of the 44 who decided not to go on with the study of medicine had low science grades.

Of special interest was the influence of the current image of the physician. As Dr. Funkenstein states, "In pursuing a career, the young student is often spurred on to achievement by his image of the kind of person he hopes to become."

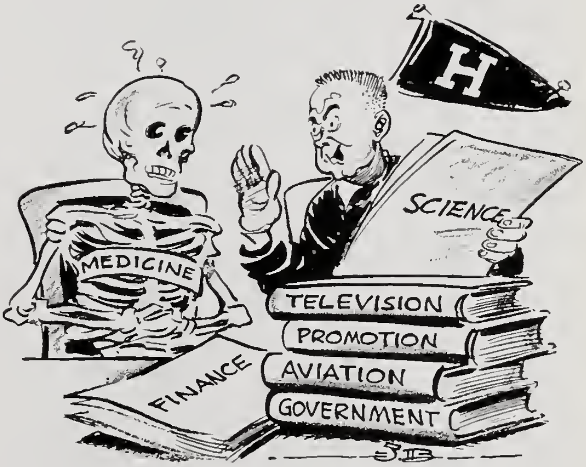
Twenty of the 44 students were classified as having a favorable image of the physician. Two of the students said they gave up their plans for a medical career because they found something which was more interesting to them. Eighteen abandoned their plans for a medical career because of their difficulties in making good grades in the sciences. The "great majority" of these students, it was reported, "would still like to go to medical school if they felt it possible."

As to those who had an unfavorable image of the physician, 8 stated that they looked upon the physician as an "inferior scientist." Other quotes were:

> "It's nice in medical practice to help people, but you can help people much more by discoveries in science"; "medicine is too much application"; "it's not challenging enough, you can't use your full powers"; "a doctor just memorizes, he's not at all intellectual"; "you don't have to be a good scientist to be a good doctor"; "people are not predictable but chemical reactions are."

Sixteen thought of the physician as a nonhumanitarian person. Among the quotes attributed to them were:

> "Physicians are just scientists without broad interests, without real interest in people"; "the doctor is just a person who treats isolated parts, like the heart or the lungs"; "the doctor is ruled by the laboratory test and the patient is just another test"; "doctors are coldly scientific."



"*Scram, Skelly . . . You're the Old Frontier!*"

"These students often worked in accident rooms or in the wards of local hospitals in the Harvard Volunteer Program," Dr. Funkenstein writes. "They were appalled at the interns and residents whom they described as 'only interested in science'; 'they're not very human'; 'they are cold and cynical and make jokes about patients'; 'they depersonalize patients'; 'too much emphasis on research and too little on the doctor-patient relationship'; 'medical school is 4 years divorced from the humanities'; 'shining new hospitals, one intricate part is the modern doctor'; 'when you enter a hospital as I did as a patient, it was a crashing of my ideals'; 'in a medical school you don't live for 4 years, it's not an adventure.' "

Of significance were the places of residence of students and their images of physicians. Most of the students from the smaller towns had a much more favorable image of the physician than those in large cities or suburbs.

Finally, Dr. Funkenstein states, "It is not surprising that the two factors of major importance to students who abandoned their medical career plans during college were the inability to make high science grades and the development of an unfavorable image of the physician."

Again, a much broader study is needed to draw final conclusions. One of the most significant aspects of the Harvard study, to your Observer, is the impression made by interns and residents. If generally true, medical schools have fallen down somewhere along the line.

★

Fashions in Glasses

Once upon a time eye glasses were considered much more utilitarian than they are today. In your Observer's youth, no one dreamed they would become adjunct to fashions. That lay far in the future. It was not until World War I that styles in glasses began to change to such an extent that the wearer became conscious of the contribution they might make to his general appearance.

Your Observer recalls the "pinchers" of the 1920's. He can testify that they were not only difficult to keep in place on a hot summer's day but were often responsible for sores on the bridge of his nose which were long in healing. He also remembers the rimless glasses which were thought to be the least noticeable and consequently were widely worn. However, they were costly because of frequent breakage. For a short period during World War I blue steel frames were popular. In fact, "they went to war," many of the officers in the armed forces wearing them. Most commonly worn were gold-rimmed frames, which not only were utilitarian but conveyed an appearance of affluence.

Women of that day shunned glasses as contributing to the appearance of age. As Harry G. Forster writes in *Modern Maturity* for August–September, "Many a lovely lady of uncertain age fumbled around the drawing rooms, greeting the wrong people and eating the wrong things because she could not see. No self-respecting young lady, however, would be seen dead with glasses, unless she was practically blind, in which case she expected to end her days as an old maid anyway. Mothers, uncles, aunts and grandparents, all right, but the younger set simply didn't go in for them unless you were a hopeless intellectual—egg head, I believe they call them today."

Times have changed, according to Mr. Forster: "People who think a lot of their appearance, personality and opposite sex appeal no longer shrink from the thought of wearing spectacles. I hardly think it is because they have become more sensible. Since when have fashions and common sense ever had much in common? That is a function of the human race that has not improved to any marked degree over the years. So what has made the glasses of today so bewildering and such a problem?

"Just step in front of the window of any spectacle manufacturing shop and you will understand what I mean. At first glance you will think that you are standing in front of a jewelry store. Then as your eyes begin to focus, you gradually realize that you are actually looking at spectacles that people are buying—and wearing—in increasing numbers."

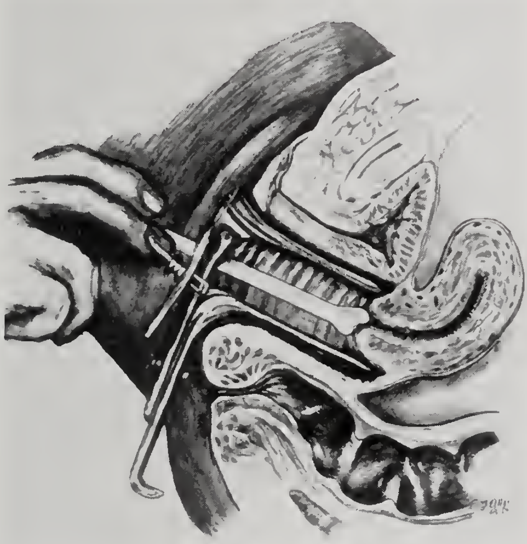
There are now, he says, glasses for every hour of the day, for every mood, and for every occasion. There are those with slanting openings and surrounded by bright, flashing semiprecious stones. There are those of translucent plastic, many studded with mother-of-pearl. There are also a variety of colors from which to make a choice.

In other words, glasses are no longer worn for their utilitarian value alone but are related to fashions of the day. Nevertheless, it must be admitted that for the most part they are much more comfortable than those of a former day.

T. W.

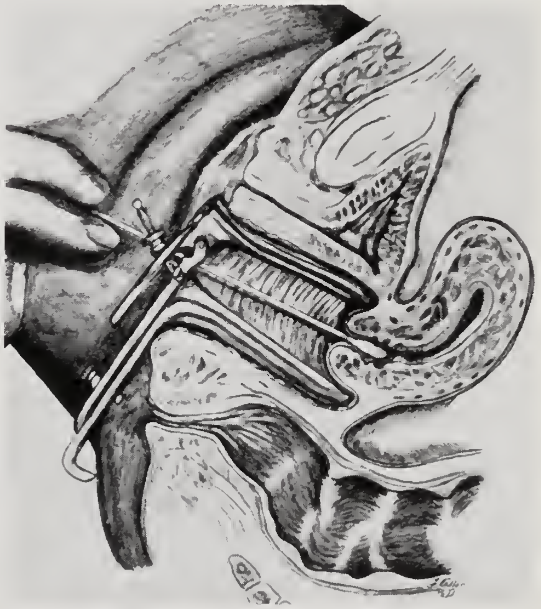
Conquering Uterine Cancer is EVERY Physician's Responsibility

Preferred Technic



Scrape the portio with ONE
COMPLETE turn around the os.
Deliver cells to glass slide
with EVEN spread.

and



Twirl cotton applicator to firmness.
Twirl in the same direction while
picking up cells and
delivering to glass slide.

The above simple procedures are highly efficient in detecting early asymptomatic, unsuspected cervical cancer and many cases of corpus carcinoma.

The only chance of diagnosing *early* cancer — before symptoms occur — is to make a practice of examining WELL patients REGULARLY.

Vaginal cytology should be a part of periodic pelvic examination of both pregnant and non-pregnant patients.

A film, "Routine Pelvic Examination and the Cytologic Method"
is available for showing to physicians.

Call or Write
American Cancer Society
District of Columbia Division, Inc.
810 18th Street, N.W.
Washington 6, D.C.
Executive 3-3690

FACTS ABOUT THE D. C. SOCIETY FOR CRIPPLED CHILDREN

The District of Columbia Society for Crippled Children, Inc., is a private, nonprofit facility dedicated to the treatment of children of all ages and to the education of children of preschool age who are suffering from crippling conditions when those services are not a duplication of services available elsewhere. It is under the supervision of a Medical Director and governed by a board of professional and business persons devoted to the civic and cultural improvement of the community.

What types of disabilities are included in the program?

1. It finds suitable places for children with nonmotor disabilities when such facilities are available.
2. It conducts an Anticonvulsive Clinic under the direction of a neurologist for those children with cerebral palsy complicated with convulsions.
3. It renders school and therapeutic services to those children with motor disabilities and other disabilities, such as speech and perceptual defects, when such services are unavailable at another facility.

What does the Society do for the child?

1. By means of its staff, its affiliates, and its consultants the Society provides diagnostic facilities for the determination of the nature and the extent of the child's disability, thereby establishing a sound basis for the correction of that disability. This having been determined, specific treatment suitable to his needs is prescribed. After treatment has been instituted, further observations are made by the consultants to determine progress and the necessity for changes in the methods of treatment.
2. Education is provided by 4 teachers who are qualified in the development and education of the preschool child. The purpose of the school is the development of the emotional, intellectual and social perfectables in these children.
3. Training is accomplished by the activities of 2 speech, 1 occupational, and 2 physical therapists. Highly skilled technics are used to develop the undamaged areas of the brain. The objective in their treatment is to place the child in a position where he will be more independent in the activities of daily living. Children of all ages are treated by them from the school on an outpatient basis.

What constitutes the staff?

Besides the Medical Director there are 2 consultants in cerebral palsy, both of whom are internationally known specialists and one of whom is a pioneer in the development of the modern methods of treating cerebral palsy. There is also the consultation staff, whose members are qualified specialists in their particular fields and who comprise the Scientific Council. The third division is the resident staff, which consists of a coördinator, a psychologist and parent consultant, 3 medical secretaries, 4 teachers, 2 speech therapists, 2 physical therapists, an occupational therapist, a cook, and 2 attendants.

How are children admitted to the facilities of the Society?

1. Through direct application to the Medical Director by their physician or by other authorized clinics.
2. In the event they have no physician, a parent or guardian may apply directly to the Medical Director.

What are the procedures of application for education?

1. An appointment is made for an examination by the Medical Director. At the time of this appointment the history of the child is obtained and an examination made. When specific consultations are indicated, appointments for them are made at that time. Permission to obtain reports of previous studies is authorized and an attempt is made to obtain them.
2. After all the pertinent information has been obtained an appointment is made for a cerebral palsy consultation. If, however, it is found that the child does not have cerebral palsy or a handicap which can be treated at our facility, the referring physician or clinic is notified to that effect. If the referring physician or clinic so requests, the child is placed in another facility more suitably equipped to take care of his specific needs.
3. Usually over 80 per cent of the children referred to the D. C. Society have handicaps, in most instances cerebral palsy, which can be treated adequately by its staff.
4. After the diagnosis, evaluation and recommendations have been made, copies of our com-

plete findings are sent to the referring physician or clinic. If either of them so desires, the child then matriculates in our facility.

5. Following each periodic reëvaluation a report of the results is again sent to the source of referral.

6. The child continues under our observation and treatment until he has reached the maximum of benefit or he has grown to an age when he can enter another facility.

What does the Society do for the parents?

1. By means of a parent lecture series, individual conferences, and group counseling the parents learn the general nature of the problems of cerebral palsy, the means of controlling their specific problems, and the emotional adjustment of themselves to the presence of a handicapped child in their family.

2. They receive assistance, in whole or in part, or on a loan basis for the payments of braces when necessary.

3. Assistance in placing their child in other facilities is given when necessary. This usually occurs when the child graduates from our facility and would profit better in another facility such as residential treatment, or when the parents move to another locality.

Although the child has graduated from the school of the D. C. Society for Crippled Children, his clinical observation and, when necessary, his therapeutic program continues on an outpatient basis until he has reached a maximum improvement.

Does the Society train therapists and teachers?

Yes. Teachers, therapists and secretaries from local universities receive clinical training at our facility. Physicians, medical students and nurses from local universities and hospitals also attend the clinics.

Does the Society educate the laymen of the community on the subject of cerebral palsy?

The members of the resident staff are always available and frequently deliver lectures to civic groups on the subject of the handicapped child. The object of this is to enlarge the knowledge of the problems of these children and the potentialities of proper treatment.

What is the extent of cerebral palsy in the community?

It is estimated that there are over 1,600 children under the age of 15 suffering from cerebral palsy in the Metropolitan Area. Of these 10 per cent need no treatment, 20 per cent need custodial care or will not benefit from treatment, 20 per cent will improve in a residential type of school, and 60 per cent will improve in a facility such as that conducted by the D. C. Society for Crippled Children.

Are there any indications that the children improve under this program?

By using accepted developmental scales it has consistently been shown that these children in the vast majority of cases develop beyond the predictions for a given chronologic period. In these studies children with poor attendance were used as controls, and in those instances the development was far below the chronologic developmental expectations.

Does the Society have a research program?

Yes. By the institution and development of newer technics and reporting the results, the Society contributes to the increasing knowledge of the control of the problem. It also contributes financially to the research program of the National Society for Crippled Children and Adults.

How is the program financed?

The Society is an affiliate of the National Society for Crippled Children and Adults, the Easter Seal Society. Therefore, it receives its income from the sale of Easter Seals and also from individual contributions and bequests.

A LETTER FROM SAIGON

Washington physicians have continued to extend friendly greetings to physicians in 8 countries during the last year by sending medical journals to individual doctors and institutions through the auspices of the Medical Society's Committee on Medical Journal Exchange. This Committee has matched 90 Washington physicians with their overseas counterpart and the accomplishments thus far have been gratifying. As the Committee gathered experience in this work, it learned the necessity of personally contacting every overseas doctor by mail to ascertain his interest before matching him with a Washington physician, avoiding the disappointment of no re-

CALENDAR OF SPEAKERS

The following members of the Medical Society of the District of Columbia have addressed lay groups during the past several weeks. The Society maintains a Speakers Bureau, sponsored by the Committee on Public Information, through which requests for speakers for lay groups, including radio programs, can be filled.

Date	*Speaker*	*Subject or Title*	*Organization*
August 30	Dr. Robert S. McGrath	Allergies	WTOP-Opinion Please
September 7	Dr. Frederick Y. Donn	Discussion of film, "Life Story"	Employees, Woodward & Lothrop
September 12	Dr. Frederick Y. Donn	Discussion of film, "Breast Self-Examination"	Mother's Club, Christ Lutheran Church
September 13	Dr. Clifton R. Brooks	America's Secret Weapon—Common Sense	Sons of the American Revolution
October 13	Dr. William B. Walsh	Project HOPE	Inner Wheel Club of Washington
October 19	Dr. Philip A. Caulfield	Providence Hospital's Century of History	The Columbia Historical Society
October 19	Dr. Milton Gusack Dr. Moe Weiss	The Three P's in Tuberculosis Control	Metropolitan Washington Tuberculosis Conference

sponse to letters and packages sent by some of the first doctors who volunteered their efforts in this program.

There are still many doctors in underdeveloped areas who would welcome medical journals. For example, a doctor in Ghana needs a journal in tropical medicine. A Vietnamese doctor requests journals on X-ray diagnosis and roentgenology, and many other doctors would welcome monthly journals which our members regularly receive, read and discard.

The following letter received by Dr. Christopher Bever from Saigon, Vietnam, is reprinted because of its interest:

"Dear Dr. Bever:

"I have received your letter of February 2 and I am happy to learn that you are very interested in leprosy. This disease is still an important endemic disease in our country where there is a lack of physicians and laboratories. At the present time, 2 or 3 American doctors, among them 2 women doctors, are working in our country to take care of the lepers. These patients are the most unhappy people on earth, and to give you an idea about it I am sending you the story and photo of a patient who had amputated himself his left hand. This story shows that leprosy is a moving problem which could raise the conscience of the physicians and charitable people of all countries.

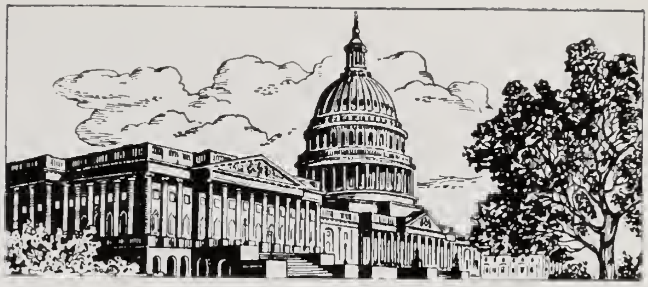
"I thank you for your *Journal of the American Medical Assocation* that I continue to receive. This issue is very useful to me as it allows me to follow the new scientific discoveries in America.

"The papers arrived here in good condition and we enjoyed reading them; there were many interesting articles connecting with our work in Choquan hospital (i.e., brief psychiatric approach for the clinician—control of neuromuscular manifestation of severe systemic tetanus).

"Here is a picture of Choquan hospital. It is a very old hospital, initially devised for 200 beds, but now its patients usually outnumber 600. It is composed of many departments: a department for psychiatric patients (a paying section and a no-fee section), a department for leprous patients, a department of sick-detainus, a department for communicable diseases, and a nursery for leprous children isolated from their parents and sometimes children born from mad mothers.

Sincerely yours,
Docteur Trân-Văn-Bȧng"

Those physicians who would like to participate in this continuing program are urged to drop a card to or call the Chairman, Dr. Stanley J. Talpers, 1712 Eye Street, N.W., telephone Sterling 3-1215.



NEWS & PERSONALS

Meetings

The Departments of Obstetrics and Gynecology of the Washington Hospital Center will present a Ford Foundation Lecture, December 8, 1961, at 8:00 p.m., in the School of Nursing Auditorium. The Lecturer will be Dr. Alexander Brunschwig, Professor of Clinical Surgery, Cornell University School of Medicine, and Attending in Surgery, Memorial Hospital for Cancer and Allied Diseases, New York. His subject will be "The Role of Surgery in the Treatment of Pelvic Malignancies." All physicians are cordially invited to attend.

The Saint George Society of Medical Students will sponsor a meeting in the Medical Society's auditorium, Tuesday, December 5, at 8 p. m. The guest speaker will be Dr. Richard E. Shope, a member of the Rockefeller Institute for Medical Research, New York City. His subject will be "Viruses and Their Relationship to Cancer."

Members of the Medical Society are cordially invited to attend this lecture. A social hour in the library will follow the meeting.

General News

The Executive Board of the Medical Society of the District of Columbia, Dr. James W. Watts, Chairman, held its monthly meeting on September 25, 1961. The Board voted to contribute $200.00 to the Medical Council of the Washington Metropolitan Area to be used for administrative expenses and costs incident to its quarterly meetings, providing a similar contribution is made by the neighboring medical societies.

It was reported to the Board that the 12th Annual Meeting of the Student American Medical Association will be held in Washington, D. C., May 9–13, 1962. Dr. James Spencer Dryden, who will be President of the Society in 1962, has been requested to serve as a member of the Host Committee and has accepted the assignment.

Dr. James J. Feffer, a member of the Committee on Medical Care, was appointed by President Stubbs to attend the Second National Congress on Prepaid Health Insurance, in Chicago, October 14–15, as the Society's representative.

Dr. Jed W. Pearson, Jr., Chairman of the Committee on Medical Care, was named to represent the Society on the Health and Welfare Committee of the Washington Metropolitan Regional Conference.

The Society was represented at the Medical Self-Help Training Program in a National Emergency in Brooklyn, New York, October 17–19, by Dr. Howard C. Pierpont. Dr. Stubbs made this appointment at the request of Dr. F. J. L. Blasingame, Executive Vice President of the AMA. The purpose of the program was to train physicians to teach their colleagues, when they returned home, and together engage in a public educational program aimed at self-help in the event of a national disaster.

The above appointments were approved by the Board.

During the Annual Meeting of the American Medical Association in June, the House of Delegates approved a plan to coöperate in the **recruitment of volunteer physicians for emergency service in the foreign mission field.**

The AMA's Department of International Health, which is seeking the names of physicians who will volunteer to serve in the mission field on a temporary basis, is receiving the coöperation of agencies representing every religious denomination in the United States which sponsors medical missionaries.

Each physician who volunteers is asked to furnish information which can be used by the missionary agencies in considering the qualifications of the applicant. The final choice as to the acceptability of each volunteer physician rests with the screening committees of the missionary agency.

Physicians who are interested should write directly to the Department of International Health, 535 North Dearborn Street, Chicago 10, Illinois.

Five members of the **Medical Advisory Committee to the D. C. Department of Health of the Medical Society of the District of Columbia** appeared and testified before the District Commissioners at a public hearing, October 10, in regard to the 1963 budget estimates pertaining to the Department of Health. In his opening remarks, Dr. William P. Herbst, Chairman of the Committee, noted that the Medical Society's keen interest in and concern for the public's health are attested by the fact that it has assigned some 150 physicians to serve on subcommittees related to public health and medical service facilities. Dr. Herbst's remarks were concerned primarily with budgetary problems.

Other members of the Committee who testified were: Dr. Hugh H. Hussey, concerning the area of administration; Dr. Leon Yochelson, on the Bureau of Mental Health; Dr. Paul B. Cornely, on matters relating to (1) the health of mothers and children, and (2) chronic diseases and disability; and Dr. J. Winthrop Peabody, Sr., the budget, with particular reference to environmental health.

Colonel Humbert L. Riva, Chief of the Obstetrical-Gynecological Service of Walter Reed General Hospital since 1946, retired from service early in July. Colonel Riva has been an associate member of the D. C. Medical Society's Obstetrical Board. Dr. C. K. Fraser, Chairman of the Obstetrical Board, in a letter to Major General Floyd L. Wergeland, Commanding Officer of the Hospital, expressed the Board's appreciation of Colonel Riva and his staff "for their dedicated devotion and many prudent contributions to a more effective management of the pregnant patient, from which we all benefited."

Colonel Edward A. Zimmerman, who succeeded Colonel Riva as Chief of the OB-GYN Service at Walter Reed, has also been designated to succeed him as an associate member of the Obstetrical Board.

Colonel Riva has accepted the position of Professor and Chairman of the Department of OB-GYN, Seton Hill College of Medicine and Dentistry, Jersey City, New Jersey. He will also be obstetrician-in-charge of the Margaret Hague Memorial Hospital and gynecologist-in-charge of the Jersey City Hospital, all part of the Seton Medical Center.

The 1961 revised and expanded edition of **"Medicolegal Forms with Legal Analysis"** is just off the press. Single copies are available to physicians and medical students without charge from the American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois. To non-physicians and hospitals there is a charge of $1.00 per copy.

The booklet contains 47 forms in 18 categories. The largest number is under Written Consent to Treatment, but there are forms dealing with Confidential Relationship, Discharge of Physician, Artifical Insemination, Autopsies, and many others. This is an invaluable reference guide in the medicolegal field.

The 354th General Hospital, of the 805th Hospital Center, Brigadier General Frank E. Wilson, Commanding Officer, was **reactivated October 15,** and moved to Fort George G. Meade on October 28. This 1,000-bed hospital is under the command of Colonel Reber M. VanMatre, M.C. Most of its staff of physicians, dentists, nurses, and listed technicians are residents of Washington and vicinity.

Major General Thomas J. Hartford, who retired on September 30 as Deputy Surgeon General of the Army, has accepted the position of **Executive Director of the Association of Military Surgeons of the**

United States, effective October 15. He has had more than 30 years' service in the Army.

General Hartford has been succeeded by **Brigadier General Howard W. Dean,** who has been Director of Personnel and Training for the Surgeon General of the Army.

The appointment of General Hartford to the Association of Military Surgeons will permit Colonel Robert E. Bitner to devote his full time to the editing of *Military Medicine*, the Association's official journal.

The Section on Radiology of the Medical Society of the District of Columbia has elected the following officers to serve during 1961–1962:

Dr. Alfred A. J. Den, *Chairman-elect*; Dr. William E. Sheely, *Secretary-Treasurer*; Dr. Albert Miele, *Counselor*, and Dr. George Tievsky, *Alternate Counselor, to the American College of Radiology.*

Dr. John S. Hashim has taken office as Chairman of the Section for this year.

Dr. John D. Porterfield, Deputy Surgeon General of the Public Health Service, has announced the appointment of **Dr. Wallace L. Chan** as his **Special Assistant.**

Dr. Chan was an Active member of the Medical Society of the District of Columbia several years ago when he was Assistant Research Professor at George Washington University School of Medicine. At that time he also served as consultant to the Department of the Army and the Public Health Service. He is a graduate of Stanford University School of Medicine, and prior to his new assignment was Assistant Clinical Professor of Medicine at Stanford.

Dr. W. Palmer Dearing, Director of Health Services, Office of Civil and Defense Mobilization, Public Health Service, retired on August 31 to become the first **Executive Director of the Group Health Association of America.** He has been succeeded by **Dr. James K. Shafer,** a Regular Corps officer who has served with the Public Health Service since his graduation in 1938 from the University of Nebraska School of Medicine.

Freedmen's Hospital was transferred to the jurisdiction of Howard University under a law signed by President Kennedy, September 22. The bill also authorized construction of a new 500-bed building. Under the new setup, Freedmen's will serve as a teaching hospital for Howard University as well as offering general and specialized patient care. The Hospital has been in existence since 1860.

Mr. Stephen T. Donohue resigned from the American Medical Association staff, October 1, to form The Stephen T. Donohue Company, a public relations counseling organization specializing in the medical and health fields.

Mr. Donohue joined the AMA as Assistant Director of Public Relations in June, 1950 and has served as Director of Media Relations for the Association since 1958. In offices at 420 Lexington Avenue, New York City, he will work primarily as communications and public relations consultant to physician organizations.

Mr. Richard M. Loughery, Administrator of the Washington Hospital Center, was elected to fellowship in the American College of Hospital Administrators, September 24, during the College's 27th convocation in Atlantic City.

Two organizations in the health field have moved their headquarters recently. **The Joint Blood Council, Inc.** is now located at 1500 Massachusetts Avenue, N.W., in Suite 832.

The District of Columbia Tuberculosis Association has moved to 1714 Massachusetts Avenue, N.W.

Personals

Dr. Charles D. Shields has been appointed Executive Director of the Georgetown University Hospital. In announcing the appointment, the Very Reverend Edward B. Bunn, S. J., President of Georgetown University, stated that the office is a newly created one made necessary because the hospital has grown more complex in its activities by reason of an increase in staff and a multiplicity of its functions.

Dr. Shields has been Professor and Chairman of the Department of Physical Medicine and Rehabilitation at the Georgetown University Medical Center since 1954. He is an alumnus of the Georgetown School of Medicine and a graduate of Harvard's School of Public Health. He is Vice President of the American Congress of Physical Medicine and Rehabilitation and Consultant to the Surgeon General of the Army and to Mt. Alto and Walter Reed Hospitals. During World War II he served in the Army Medical Corps with the rank of Colonel. He is a diplomate of the American Board of Physical Medicine and Rehabilitation.

Dr. Thomas M. Peery, Professor of Pathology of George Washington University School of Medicine and Chief of Pathology at the University Hospital, is the newly elected Vice President of the American Society of Clinical Pathologists. **Dr. Oscar B. Hunter, Jr.,** of the Hunter Laboratories, and pathologist for Doctors and Sibley Hospitals, was elected to the Board of Governors of the College of American Pathologists.

These physicians were elected to office during the joint sessions of the Society and the College in Seattle, Washington, October 1–7.

Dr. George Z. Williams, head of pathology at the Clinical Center, National Institutes of Health, received the annual Ward Burdick Award from the Society of Clinical Pathologists for outstanding contributions to the field of pathology.

Dr. William B. Walsh, founder of Project HOPE, was one of 5 Georgetown University alumni who were honored, September 30, at an alumni dinner in Providence, Rhode Island. The Very Reverend Edward B. Bunn, S. J., President of Georgetown, was present and presented each of the honored guests with the annual John Carroll Award for distinguished service. The award carries the name of the founder of Georgetown University.

Dr. J. Gordon Bell was elected a member of the candidates' group of the American Society of Plastic and Reconstructive Surgery during its Annual Meeting in New Orleans, September 24–29.

Major General Oliver K. Niess, Surgeon General of the Air Force since 1958, was awarded the Air Force Association's 1961 Citation of Honor at the 15th Anniversary Luncheon in Philadelphia, September 21. The citation paid tribute to General Niess for having "displayed outstanding professional leadership in the planning and achievement of national aerospace medical objectives." General Niess is one of the world's leading authorities on space medicine and technology.

Several members of the Medical Society have responded to the request made by the Orthopedic Overseas Division of Medico to send orthopedic surgeons into underdeveloped areas of the world, particularly to train native physicians in this field. **Dr. Allan M. McKelvie** initiated the project in Jordan two years ago and is doing the administrative work needed in connection with the project.

Dr. Leonard T. Peterson spent the month of October in Jordan.

Dr. Henry L. Feffer left Washington, September 29, for Saigon, where he will be the first orthopedic surgeon to practice.

Dr. Robert L. Dow will journey to Saigon in December.

Dr. John H. King, Director of the International Eye Bank, flew to Hong Kong, October 23, with two other surgeons and Miss Elizabeth M. Lamb, the nurse who has assisted Dr. King, to practice and teach the technic of corneal surgery at 3 hospitals. After they learn the technic, the Chinese physicians will operate under American supervision. The pharmaceutical industry in the United States is providing the money for the Hong Kong mission.

Dr. William J. Tobin was in Peru, July 6 to August 12, at the invitation of the Smithsonian Institution and Cornell University's Peru Project. He made orthopedic examinations of a large group of Indian children high up in the Andes in a community known as Vicos. While in Peru, he was also called upon to do some surgery in the Peruvian community of Huaraz.

Dr. Winfred Overholser, Superintendent of Saint Elizabeths Hospital, was notified recently that the French Government had conferred upon him the rank of Chevalier of the Order of Public Health. Dr. Overholser attended the meeting of the World Federation for Mental Health in Paris, August 30–September 5, where he discussed a paper, "Mental Health as a Public Health Responsibility."

Dr. Matthew Ross, Medical Director of the American Psychiatric Association, was in Australia and New Zealand during the months of July and August. For a 2-week period he lectured before the Canterbury Mental Health Council at Christchurch, New Zealand, and visited the psychiatric hospitals in that vicinity. He also addressed the student body at the Otago Medical School, New Zealand's only medical school.

In Australia, Dr. Ross spoke in Sydney, Melbourne, Brisbane and Adelaide, as well as to the various University teaching hospitals and medical schools. Some of his lectures were under the auspices of the Australian Postgraduate Federation in Medicine.

Dr. R. Frank Jones, Medical Director of Freedmen's Hospital, is one of 8 physicians among 11 persons appointed by President Kennedy to the National Advisory Committee on the Selection of Physicians, Dentists and Allied Specialists. This Committee advises the Selective Service System on the selection of specialists for the armed services.

Dr. Leroy E. Burney, Surgeon General of the Public Health Service from 1956 to 1961 and an Honorary member of the D. C. Medical Society, is now residing in Philadelphia where he has accepted the position of Vice President of Health Sciences at Temple University.

Dr. Everett J. Gordon was elected Vice President of the Jefferson Orthopedic Society at its annual meeting in Philadelphia, September 22 and 23.

The Society consists of graduates of Jefferson Medical College who practice orthopedic surgery and former residents in the orthopedic training program at Jefferson Medical College Hospital.

At the 47th Clinical Congress of the American College of Surgeons, held in Chicago, October 2-6, approximately 1,103 surgeons were inducted into fellowship in the College. Among them were the following Active members of the D. C. Medical Society: **Drs. Paul B. Bender, Charles H. Clark, James H. P. Garnett, Wendell M. Lucas, Robert A. Mendelsohn, Linwood L. Rayford, Jr., Melchior F. R. Savarese, George D. Selby, David C. Wherry, and Thomas M. Wright.**

Correspondence

WASHINGTON, D. C., September 26, 1961

TO MR. WIPRUD:

The retention of certain servicemen beyond their normal date of expiration of active duty tours is essential in order that the augmentation of the Uniformed Services, called for by the President, can be attained. Implementation poses many problems. Among them is the valid identification of the extendees' dependents who will remain eligible for certain benefits while their sponsors remain on active duty.

The extension of tours of duty may result in some dependents being without a valid Identification Card for some time. The basis of identification of dependents is, as you know, the Uniformed Services Identification and Privilege Card (DD Form 1173). Each card carries an expiration date of eligibility. This date, in the case of dependents of noncareer personnel, is the same as the expected expiration date of the sponsor's tour of active duty.

In the past, the "expiration date" on the ID Card has been the governing factor in determining that eligibility still exists. Since the involuntary extension of the tours of duty of many servicemen is effective almost immediately, the probability exists that some still-eligible dependent wives and children may apply for civilian medical care to which they are still entitled. They may not, however, have in their possession the required proof of their eligibility.

No change is contemplated in the provision of our contract which states that claims may not be processed for payment until the dependents have proven their eligibility to receive care. Service personnel are being advised that it is their responsibility to take necessary action to "up-date" the evidence of dependents' eligibility.

It is most probable, however, that some dependents will be in need of authorized medical care from civilian sources prior to the time this action has been completed. In such cases, the dependent has been instructed to explain the situation to the physician and hospital authorities. They have been advised to present, if available, some tangible evidence, such as allotment checks, official orders, directives, or personal letters, which states the pertinent facts to the physician or hospital to help support the dependent's claim of continued eligibility.

This office is not empowered to broaden the "good faith" aspect of our contract. The number of dependents temporarily "unidentified" who require medical benefits will not be large.

In view of the situation at hand, I would appreciate your assistance in encouraging physicians and hospitals to exercise patience and understanding during the next several months when their services are requested by dependents of these extendees.

I must emphasize, however, that no claims may be processed for payment unless the dependent has provided a valid DD Form 1173 or a statement of eligibility as required by our contract and as outlined in ODMC Letter No. 1–60.

This information is being furnished to all contractors and to the editors of leading medical and hospital journals. We would appreciate it if you could publish a copy of this letter, or an extract of the information, in the next issue of your Medical Society journal or any other news media which are circulated to your membership.

Sincerely,
BRIGADIER GENERAL W. D. GRAHAM, MC, USA
Executive Director, Office for Dependents' Medical Care, Office of the Surgeon General, United States Army

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KENSINGTON, MARYLAND, October 6, 1961

TO THE EDITOR:

Does your journal ever consider publishing communications from the laity? I would be most appreciative if the following notes could be accepted.

This might well be called a query on the philosophy of the surgeon and the physician regarding the point at which they consider their responsibility to their patient terminates.

A physician is called in by a patient whom he finds to be in need of surgery; the surgeon confirms this diagnosis and subsequently all the skills, care and attention of modern medicine are focused on one objective—the care of this patient. He is given the most meticulous preoperative treatment in order to build his strength and resistance and to produce the proper mental attitude. The postoperative treatment is equally intense. The patient at this point has gone through the full gamut of emotions—anxiety, fear, pain, and eventually relief, and the return of a sense of well-being. Now he is ready to leave the hospital to recuperate and prepare for his return to his responsibilities. Generally by this time he has come to regard his physician and surgeon in a more personal manner, a prop on which he has leaned during a most difficult period.

At what point does the surgeon or physician consider it advisable to present this patient with the inevitable fees? The average wage-earner in this country, even with hospital and surgical insurance, undoubtedly experiences severe economic conditions for the period of time it takes to fulfill these obligations and is, surely in most cases, most eager to honor his medical debts.

Does the surgeon or physician exercise any judgment as to the propitious moment to send out his bills? Does his Hippocratic Oath regarding the welfare of his patient end at the moment the patient walks out of the hospital? Does he consider that the welfare of his patient and his responsibility therein extend to the point where he can conscientiously feel that his patient is fully recovered and capable, mentally and physically, of reassuming his responsibilities?

These questions are prompted by a recent personal experience. My husband, after undergoing major surgery and making an exceptionally good postoperative recovery, was released from hospital. Scarcely a week from the time of his release, bills from surgeon and physician were received. The mental and physical setback incurred by worry over these bills became quite evident. How to hurry the recuperation in order to get to work became uppermost in his mind. So much of the time and skill of these men was negated by their action.

It would appear that this is the type of bad judgment by men in the medical profession which engenders thoughts of socialized medicine. So much depends on the public attitude, and lately there seems to be an increase in criticism of the medical profession in this respect.

I am sure that it is realized that one can be most grateful for medical assistance rendered at a time of need and can at the same time be most embittered by an action which obviously demonstrates such a lack in judgment.

Sincerely,
MRS. LIONEL M. LIBBY

WASHINGTON, D. C., September 22, 1961

TO MR. WIPRUD:

The Summer Outings Committee of Family and Child Services wishes to express its thanks to the D.C. Medical Society for arranging for doctors to examine children going to our summer camps. We had a very fine group of doctors who did a very efficient job. The doctors who assisted us were:

Dr. H. M. Hobart
Dr. W. B. Morse
Dr. M. Panos
Dr. C. F. Scalessa

And from Children's Hospital:

Dr. J. Dye
Dr. M. Harkness
Dr. M. Iranyi
Dr. E. Lovrien
Dr. Schuziter
Dr. R. Stang
Dr. A. Tchoang
Dr. A. Topchick

The 1961 Camping Season was quite successful and we thank you again for the part the Medical Society did in making this so.

Sincerely,
George N. Greene, Jr.
Group Work Director, Family and Child Services of Washington, D. C.

Turlock, California, September 29, 1961

To the Editor:

We have just received in today's mail your August 1961 issue of Medical Annals. This is our first opportunity to view this excellent publication, and may we congratulate you on the fine work that you are doing.

We, naturally, were pleased to note that your article on page 489, entitled "Amulet Saves Lives," was pertaining to the Medic-Alert Foundation and its program of identification of medical problems during an emergency. Your assistance in bringing this before the medical profession of your District is indeed appreciated.

Sincerely yours,
Marion C. Collins, M.D.
President, Medic-Alert Foundation

Washington, D. C., September 5, 1961

To Mr. Wiprud:

Recently I had occasion to fly to New Haven. Due to a storm the plane was deflected to Albany, New York, and, needless to say, my anticipated plans for that day were greatly changed. Upon arrival in Albany I called my office and, as my call was made on Saturday afternoon, it was picked up by the Medical Bureau operator. I explained to her my problem, and in the most prompt and efficient manner she notified those concerned locally with my unanticipated change in schedule, as well as calling ahead to New Haven and notifying my brother of my enforced delay.

I want to express my appreciation for the fine coöperation I received.

Sincerely,
Harvey H. Ammerman, M.D.

Obituaries

CLIFT PALSGROVE BERGER, B.S., M.A., M.D.

(1902–1961)

Dr. Clift P. Berger, pathologist at Sibley Memorial Hospital, died, September 29, 1961 at Sibley. His home was at 3710 Somerset Drive, McLean, Virginia.

Dr. Berger was born at Schuylkill Haven, Pennsylvania, May 12, 1902, to John D. and Alice P. Berger. After attending the public schools of Schuylkill Haven, he graduated from Franklin and Marshall College, Lancaster, in 1924 and from George Washington University in 1927, receiving his Master of Arts degree from the latter. From 1926 to 1931 he was on the faculty of George Washington University as Instructor and Associate Professor of Bacteriology and Clinical Pathology.

Dr. Berger received his medical degree from the Medical College of Virginia, Richmond, in 1936. He interned at Sibley Memorial Hospital in Washington the following year and served a year's residency at the same hospital. He continued on the staff of Sibley as Assistant Pathologist until 1951 and as Pathologist since 1952.

He was a member of the American Medical Association, the Southern Medical Association, the Virginia Medical Society, Arlington County Medical Society, and the George Washington University Medical Society. He was an Associate member of the District Medical Society from 1952 until 1957, when he was elected to Active membership.

Surviving him are his wife, Mrs. Dorothy Russell Berger, and three sisters, Mrs. Allan Bubeck, of Kutztown, Pa.; Mrs. Stewart Nagle, of Schuylkill Haven, Pa., and Mrs. Richard Bonner, of Olympia, Washington.

Walter Reed Army Institute of Research—Milburn

(Continued from page 653)

The space situation became so acute that in July 1959 ground was broken for the new west wing of the WRAIR building. This great new wing, now nearing completion, will contain a 50,000-watt nuclear energy reactor with its accompanying laboratories, viewing rooms, preparation rooms and offices. This will be the largest atomic reactor in the Armed Forces to be used in conjunction with treatment of patients. The new unit will have a staff of about 20 experts, 7 of whom will receive licenses from the Atomic Energy Commission to operate the reactor.

The new wing will also contain medical laboratories fitted with scientific equipment of most modern design. When this new facility opens WRAIR will be even better equipped to fulfill its basic mission: "To provide the medical research and professional graduate training required by the Army to fulfill its role in the national defense."

Venous Shunts in Portal Hypertension—Hamilton and Sullivan

(Continued from page 659)

4. Carbalhaes, O. G.: Portography. A preliminary resport of a new technique via the umbilican vein. Clin. Proc. Child. Hosp. (Wash.), 1959, **15**, 122.
5. Gilfillan, R. S.: Anatomic study of portal vein and its main branches. A.M.A. Arch. Surg., 1950, **61**, 449.
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Murmur of Mitral Stenosis with Sinus Rhythm—Walker

(Continued from page 669)

addition to listening for a presystolic crescendo murmur which is sometimes difficult to time, is extremely faint or absent in the presence of sinus bradycardia, and disappears with the onset of atrial fibrillation. It is surely more rewarding than listening for a mid-diastolic murmur that is often faint or even nonexistent. Lacking the above vagaries, in teaching physicians to recognize the murmur of mitral stenosis, emphasis should be placed on the early diastolic rumble.

Summary

An analysis of sound tracings of 37 patients with relatively pure mitral stenosis and sinus rhythm indicates that the murmur of mitral stenosis usually begins in early diastole and characteristically reaches greatest intensity in ahe first and last thirds of diastole—the moments at which ventricular filling is most rapid. The ɯurmur is ordinarily less intense or is even absent in mid-diastole. In only 2 of the 37 tracings did the murmur reach maximum intensity in mid-diastole. To describe the murmur of mitral stenosis as mid-diastolic is inaccurate and confusing. In learning to recognize this murmur, accurate knowledge of the timing of the characteristic murmur is important.

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Sjögren's Syndrome—Sanford and Creston

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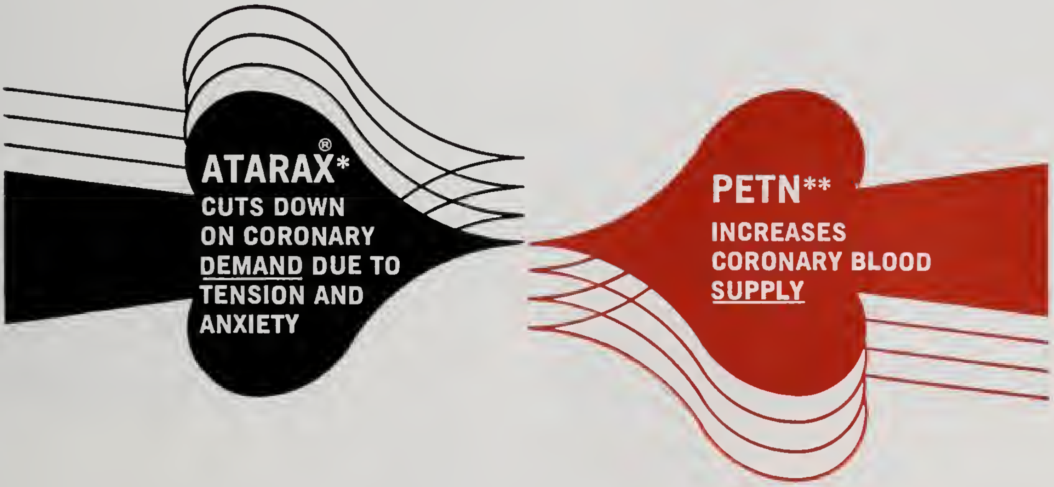
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BOOK REVIEWS

Essential Hypertension—An International Symposium. Berne, June 7–10, 1960, sponsored by Ciba. Chairman, F. C. Reubi, Berne. Edited by K. D. Bock, Basle, and P. T. Cottier, Berne. Pp. 392, with 81 figures. Berlin: Springer-Verlag, 1960.

This book reflects the thinking on hypertension of various experts throughout the world. The symposium is mostly concerned with experimental data and attempts to be limited to 2 specific subjects. The first subject is the one concerning the possible relationship between essential hypertension and salt and water metabolism. The second relates to the long-term effects of antihypertensive therapy on the clinical course of hypertensive disease.

The book is a compilation of the experimental papers presented at the meeting and the resulting discussion.

The printing, paper, and illustrations are excellent.

This book is an interesting addition for the student of hypertension.

Michael A. Corrado, M.D.

Hospitals, Doctors, and Dollars. Reports and opinions on our Good Samaritans, who are having some bad times. Robert M. Cunningham, Jr. Price, $6.95. Pp. 275. New York: Dodge, 1961.

This reviewer has read so much on medical economics he has little stomach for more. However, this book is different. It has life, it is stimulating, and it is informative. There is nothing "cut and dried" about Mr. Cunningham's collection of writings during the long period he has served as Editor of *The Modern Hospital.* He is a writer who thinks for himself and expresses himself vividly. In other words, I can highly recommend this book to those who seek objective and highly readable comments on the serious economic problems that confront doctors and hospitals.

T. W.

Heredity in Ophthalmology. Jules Francois Translated from the French edition entitled "*L'Hérédité en ophtalmologie*" by Jules Francois. Price, $23.00. Pp. 731, with 629 figures, including 6 in color. St. Louis: Mosby, 1961.

Professor Francois' book is a clear, comprehensive and definitive presentation of heredity in ophthalmology. The first 95 pages are devoted to general genetics. Generous use of charts and diagrams enhances the understanding of this complex subject. Restraint in the use of "family trees" throughout the book is admirable, providing the necessary documentation and illustration rather than confusing the reader by overwhelming numbers.

A short chapter on the Elements of Statistics and Biometry is an excellent, brief presentation in mathematical terms (with ample examples) of material which is often confusing to both readers and authors. Four short chapters cover general genetics in ophthalmology. In this section there is a most useful tabulation of the hereditary ocular disorders, giving their method of transmission and other factors which will enable the clinician to give advice on eugenics.

The major portion of the text, almost 600 pages, is devoted to a systematic study of the hereditary diseases of the eye. The importance of this subject is indicated from a portion of the preface to Part 2: "Heredity plays an important role in ophthalmology since at least 246 pathological genes are known which express themselves in ocular abnormalities, either exclusively or associated with other abnormalities."

References to the literature are voluminous and well documented. There are 20 pages of author index and an adequate subject index. This book is not only an excellent reference text but will find frequent use in clinical practice.

Charles Worth Sprunt, M.D.

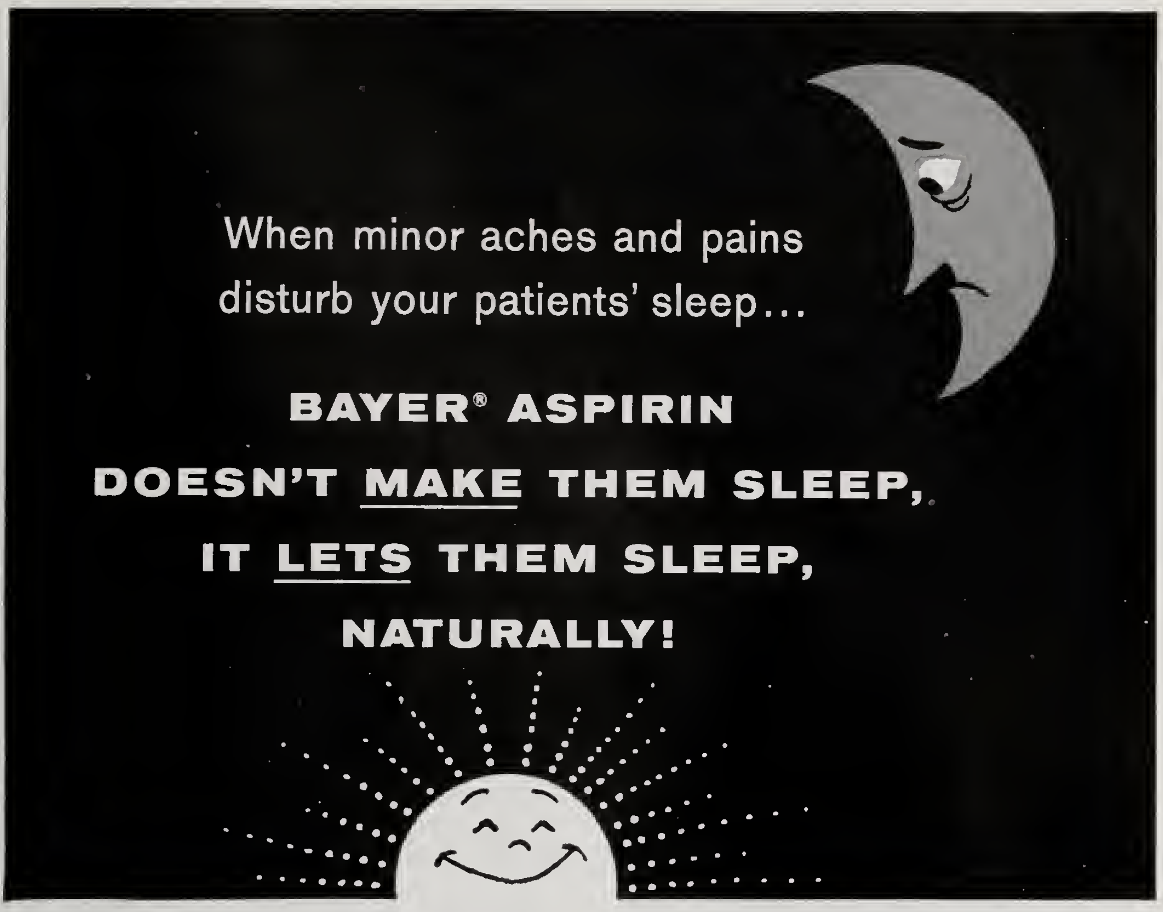
Relief of Symptoms, 2nd ed. Walter Modell, M.D., F.A.C.P. Price, $11.50. Pp. 374. St. Louis: Mosby, 1961.

This is an objective book on therapeutics, evaluating many of the newer drugs and placing them in proper perspective in relation to the drugs they are intended to supersede. The approach is somewhat unorthodox, purporting to deal with symptom relief rather than treatment of the disease per se. However, the author makes the statement: "If my approach seems to fly in the face of standard medical teaching, it is certainly at one with common medical practice, and what is more to the point, there is substantial evidence that when well controlled it is good practice."

Twenty-seven complaints are listed, which the author believes accounts for over 95 per cent of the symptoms which bring the patient to the doctor's office. Among these are included pain in various forms, anxiety, appetite disturbances, GI symptoms, dyspnea, edema, and palpitations. The complaint is dealt with by defining the problem, its scope, its etiology, and measures for the relief of the symptom.

The tables listing the various drugs, for example, tranquilizers and antidepressants, according to their chemical composition, should be helpful. It is most refreshing to be advised that a new drug is not necessarily more effective or safer than an old one simply because it is a more recent arrival on the scene. The warnings concerning new drugs which have had insufficient

(*Continued on page 50*)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Book Reviews

(*Continued from page 48*)

appraisal of their merits, indications, contraindications, and dangers are well advised. The chapter on the indications, dangers and masking effect of the adrenal steroids is an important one.

There is much in this book which can be helpful to most practitioners. It would make an even more significant contribution if it were to concentrate on finer details of treatment, even if this meant eliminating or tabulating those items not bearing directly on therapy.

Abraham W. Danish, M.D.

Handbook of Pediatrics, 4th ed. Henry K. Silver, M.D., C. Henry Kempe, M.D., and Henry B. Bruyn, M.D. Price (paper), $3.50. Pp. 576. Los Altos, Calif.: Lange, 1961.

The "Handbook of Pediatrics" is a small book designed for carrying in one's bag or keeping in a desk for quick reference. The book affords a comprehensive review of most of the important aspects of pediatrics. Discussions of diseases by systems include a graphic outline of important diagnostic criteria and presentation of treatment methods. Pathologic physiology and prognosis are included when indicated.

Of special value is the chapter on pediatric procedures which describes technics in clear, concise language supplemented by a few pertinent drawings. The charts of normal laboratory values, drug dosages and normal physical measurements are also valuable to the practitioner. The chapter on fluid and electrolytes is excellent in that it gives a clear description of common disturbances, explains concisely the basic pathology, and gives in outline form a basic plan of fluid therapy for the individual patient.

No major revisions have been made since the last edition; however, modifications of etiologic concepts and treatment have been made in the light of recent discoveries. Also, some newly described diseases have been included in this edition.

There are a number of typographical errors, a few of which may lead astray the inexperienced. For example, the dosage of griseofulvin for tinea capitis is erroneously given as 25 mg. 1 to 4 times a day (although the correct dosage of 250 mg. 1 to 4 times a day is given for other fungal skin diseases).

The book is one which should be of value to any physician who treats children, and especially to the intern or resident who must do much rapid reading as he works.

Roland B. Scott, M.D.
Delores E. G. Alleyne, M.D.

The Cardiac Arrhythmias. A Guide for the General Practitioner. Brendan Phibbs, M.D. Price, $7.50. Pp. 128, illustrated. St. Louis: Mosby, 1961.

The increase in the understanding and interpretation of the electrocardiogram has been associated with greater complexities for the medical student and the general practitioner. The need for a simple, straightforward review of one aspect of this problem, namely, cardiac arrhythmias, was realized by Dr. Phibbs.

The text briefly describes the more common arrhythmias and presents some excellent tracings as examples. The mechanism for the arrhythmias is discussed, followed by a short note on treatment in some instances.

The material by intent is far from complete, even compared to the subsection in standard texts of cardiology. Many of the numbered pages have no written or photographic material at all and the text could easily be condensed into a small manual or pamphlet.

Several descriptions of the arrhythmias are followed by a paragraph summarizing what had been just written in the preceding paragraph, again suggesting possible condensation into a less expansive manual.

The material is quite easy to read and digest, and should serve students, general practitioners, and nonmedical subspecialists as a quick review of cardiac arrhythmias that are frequently encountered in the course of practice.

Herbert L. Tanenbaum, M.D.

Ciba Foundation Study Group No. 7. Virus Meningo-Encephalitis, in honour of Professor K. Todorovic. Editors for the Ciba Foundation: G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P., and Margaret P. Cameron, M.A. Pp. 120, with 11 illustrations. Boston: Little, 1961.

This booklet is a recording of the proceedings of a study group which met on September 27, 1960.

ECHO, Coxsackie (and Coxsackie-like), polio and arthropod-borne (called "arbo") viruses are discussed from clinical, ecological and laboratory aspects. Postinfectious virus encephalitis and the neurological complications of Behcet's disease are also covered. When all is said differential diagnosis clinically is still often impossible. However, many fascinating bits of information are scattered throughout. Distinguishing quickly between tuberculous meningitis and viral meningoencephalitis by doing a radioactive bromide level in blood and spinal fluid is one such "pearl."

This little book is recommended because in a readable brief fashion it stimulates awareness of the viral meningitis problem.

Henry R. Wolfe, M.D.

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You and your patients should read the story beginning on page 69—December, Reader's Digest. It deals tersely and thoughtfully with major issues raised in the investigation of the prescription drug industry.

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BOOK REVIEWS

Pathology, 4th ed. Edited by W. A. D. Anderson, M.A., M.D., F.A.C.P. Price, $18.00. Pp. 1389, with 1385 illustrations and 7 color plates. St. Louis: Mosby, 1961.

The fourth edition of "Pathology," edited by W. A. D. Anderson, consists of 1,389 pages, 1,385 illustrations, 7 color plates, well selected references, and a very complete index. Thirty-five well-known authors have contributed 45 chapters on subjects of their special interest. This makes the book useful as a reference tool for advanced students as well as for pathologists and other practicing physicians.

Virtually the entire book has been extensively revised and several subjects and entire chapters have been completely rewritten. There are abundant illustrations of excellent quality in every chapter. New chapters on the hypersensitivity diseases and on mesenchymal tumors have been added. Additions have also been made in the fields in which recently gained knowledge has altered the basic concept of disease. These valuable additions have resulted in the necessity of using slightly smaller print than that formerly used and has produced a book weighing approximately 9 pounds. It is, however, one of the most complete and up-to-date textbooks available on the subject of pathology.

T. Winship, M.D.

Medical Pharmacology—Principles and Concepts. Andres Goth, M.D. Price, $11.00. Pp. 551. St. Louis: Mosby, 1961.

Although "Medical Pharmacology" has been written as a textbook, it is a concise treatise covering quite briefly the entire field of pharmacology. It is, therefore, not burdensome in detail, but, as the author states, consists of emphasizing principles and concepts rather than presenting the type of factual information which students memorize and promptly forget.

I feel that this book is well intended for the physician who needs a refresher in physiology and medical therapeutics. Its easy reading also provides an excellent review for the physician studying for board examinations. This book in conjunction with one of the more comprehensive, standard texts of pharmacology might well serve the medical student.

The material presented is quite up-to-date, with separate sections on the adrenal steroids, the newer diuretics, and treatment of neoplastic diseases. There is also a section on psychopharmacology, including the tranquilizing drugs.

In summary, the subject is well covered, well written, and could be well recommended for the library of every practicing physician.

J. Frederick Barr, M.D.

Baillière's Pocket Book of Ward Information, 10th ed. Revised by Marjorie Houghton, M.B.E., S.R.N., S.C.M., D.N. (Lond.). Price, $2.50. Pp. 213. London: Baillière, Tindall and Cox, 1961. Baltimore: Williams & Wilkins, exclusive U. S. agents.

This is a handy, pocket-sized book, designed for both student and graduate nurse, with a wealth of medical and nursing facts. Its chapters range from those on drugs and their administration, sterilization technics, to fluid and electrolyte balance. Commonly used blood and urine tests are described, as well as preparation of patients for X-ray studies, enemas, or oxygen therapy.

The author undoubtedly has intended to keep the book as compact as possible by printing only a few graphs, but certain sections (i.e., "Maintaining Respiration") might be improved through the uses of sketches or pictures. Although the chapter on Dangerous Drugs and Poisons is strictly pertinent to Great Britain, general methods of safeguarding the public from these substances are applicable in this country.

In summary this is a fine, readily available reference for the nurse on the ward.

A. E. Marland, Jr., M.D.

Management of Obstetric Difficulties, 6th ed. Revised by J. Robert Willson, M.D., M.S. Price, $16.50. Pp. 687, with 323 text illustrations and 1 color plate. St. Louis: Mosby, 1961.

In the 6 years between the appearance of the fifth and sixth editions of "Management of Obstetric Difficulties," many changes have occurred in obstetric practice. The present edition is timely in that it will bring the practicing obstetrician up-to-date on current advances in diagnosis and therapy. Among some of the topics adequately discussed are cervical incompetence, carcinoma of the cervix in pregnancy, diabetes and prediabetes, the use of diuretic and hypotensive agents, ataraxic drugs, Pitocin infusion, and fetal electrocardiography.

The book is well illustrated with photographs, graphs and drawings. The number of references at the end of each chapter, while not exhaustive, is adequate. The index seems to be carefully done. The type and make-up of the book make for comfortable and easy reading.

This volume is a worthy successor to the previous editions. It can be readily recommended to practicing obstetricians, those in training, and medical students alike.

Jed W. Pearson, Jr., M.D.

(Continued on page 24)

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1 Graham, Sotto and Paloucek—Cancer of the Cervix

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Book Reviews

(*Continued from page 22*)

Ciba Foundation Symposium on Quinones in Electron Transport. Editors for the Ciba Foundation: G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P., and Cecilia M. O'Connor, B.Sc. Price, $11.00. Pp. 453, with 82 illustrations. Boston: Little, 1961.

"Quinones in Electron Transport" is the subject of an international symposium conducted by 29 scientific experts.

The quinones of the coenzyme Q group are especially considered and methods for their identification, isolation and purification are given. A study of their physical and biochemical characteristics is presented.

Following each paper is a discussion which solves some problems but brings out others that become the subject of further research.

This book, of over 400 pages, is specifically intended for those interested in the biochemistry of the great new field of the quinones. For them it should be a valuable reference work.

Harrison H. Leffler, M.D.

Ciba Foundation Symposium on the Nature of Sleep. Editors for the Ciba Foundation: G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P., and Maeve O'Connor, B.A. Price, $10.00. Pp. 416, with 101 illustrations. Boston: Little, 1961.

This is another distinguished volume which records almost verbatim the proceedings of the Ciba Foundation Symposia on Sleep. Sir John Eccles, the Australian physiologist, was chairman and made a splendid one, judging from his opening remarks and final summarization.

All the material is clearly basic in type but some is easier reading for the clinically-minded, such as your reviewer. The collection of 18 papers are by various authors, who appear to have been selected because of their prior works in this general field. The discussion period is recorded at the end of most chapters; this is a feature rarely done in any such complete manner in an American symposium.

I regret that there was no clinical portion to include basic studies on subjects such as narcolepsy or catatonia.

I believe the thoughtful clinician will want to read completely: (1) the chapter on human sleep and polygraphic technics; (2) a fascinating one on sleep and hibernation; (3) sleep patterns in some polar expeditions; (4) EEG, EMG and polygraphic recordings during the supposed dream phase of sleep.

The more recent pertinent basic neurophysiologic work which held my attention included (1) Betz' cell behavior after antidromic stimulation; (2) more new material on the inter-relation of reticular formation and the cortex; (3) effects in the cat EEG after lower medulla stimulation.

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Thomas L. Auth, M.D.

Symptom Diagnosis, 5th ed. Wallace Mason Yater A.B., M.D., M.S. (in Med.), F.A.C.P., and William Francis Oliver, B.S., M.D., F.A.C.P. Price, $15.00. Pp. 1035. New York: Appleton, 1961.

This book is well known. It was first published in 1927, and many thousands of students, house officers and practicing physicians have received prompt help in diagnosis from its pages. It is not a textbook but a book to be kept on the doctor's desk for quick reference in the narrowing down of diagnostic possibilities. It deals with symptoms and signs in 2 parts—those related to some region of the body and those of a nonregional nature. A somewhat similar work, French's "Differential Diagnosis," is quite different in that it requires much more reading time to accomplish the same objective. Since it is important to know how to use "Symptom Diagnosis," the authors have prepared concise instructions on "How to Use This Book."

The number of new diseases that have cropped up since the previous edition of this book (1948) is astounding. Careful comparison of the fourth and fifth editions shows that a thorough revision has been done. Additional symptoms and signs have been added, and there are certainly few that are not discussed. The authors spent 3 years in the revision.

Many Washington physicians and particularly Georgetown graduates will remember Bill Oliver, the new coauthor. He practices now in Santa Barbara, California, and teaches at the University of Southern California under the aegis of George Griffith, Professor of Medicine.

Bertram F. Schaefer, M.D.

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December 1961 VOLUME XXX • NUMBER 12

Ruptured Abdominal Aortic Aneurysms

CHARLES A. HUFNAGEL, M.D., F.A.C.S.
Professor of Surgery, Georgetown University School of Medicine

PETER W. CONRAD, M.D.
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The increasing recognition of the natural history of arteriosclerotic aneurysms has led to increased efforts for definitive treatment. Technical advances have made possible highly satisfactory methods for the suturing of arteriosclerotic vessels and the replacement of those arteries which are diseased beyond the possibility of direct repair. The knowledge that aneurysms of the abdominal aorta which are sufficiently large to be clinically detectible inevitably rupture has led to the recognition of the principle that elective resection of such clinically detectible aneurysms is the treatment of choice. The validity of this principle has been substantiated by a low operative mortality even in the presence of known arteriosclerotic disease which may involve other major systems such as the heart, kidney or brain. This low operative risk has been attained when procedures were carried out with rigid preoperative and postoperative control prior to the time of rupture. In over 500 cases of resection of abdominal aortic aneurysms the risk of elective resection has been approximately 3 per cent. In essentially all of these patients some degree of generalized arteriosclerotic involvement was present. Despite this encouraging picture there remains a group of patients who either refuse elective operation or because of the asymptomatic character have not known of its presence until the onset of leakage. Abdominal pain or flank pain may be the first sign of impending disaster. In others the sudden loss of consciousness without pain, associated with fall of blood pressure and shock, may initiate the episode of rupture. The diagnosis of leaking or rupturing abdominal aneurysm is an indication for immediate operation.

The mechanisms of aortic enlargement, aneurysm formation, and rupture have not been widely known. It has frequently been thought that when an abdominal aneurysm ruptures it does so suddenly and abruptly and that this is then followed by immediate exsanguination. As a matter of fact, this is rarely the case.[1] Initial break-through of the aortic aneurysm is most commonly retroperitoneal and is followed by limited hemorrhage, which usually spontaneously slows or stops for a short period of time. This is followed by secondary bleeding or renewed activity of bleeding, which ultimately terminates in exsanguination. Thus, between the onset of symptoms and the final event there is a golden period for surgical intervention. A review of the pathologic anatomy of aneurysms gives insight into the mechanism of enlargement and rupture. Complete understanding of these phenomena, which we have gained from wide experience and correlation of findings in patients, provides the basis of physical findings and diagnosis of both the unruptured and ruptured aneurysm. As the arteriosclerotic process involves the aorta, the initial enlargement of the aorta is in an anterior direction. This predilection of the anterior wall of the aorta to be displaced toward the abdominal wall before there is major enlargement laterally, moves the aortic wall to a position where it is more easily palpable, usually in the area just above the umbilicus. Concomitantly, there is elongation of the aorta, which displaces the bifurcation downward. Later, lateral enlargement becomes evident. This is most frequently first toward the left and then bilaterally. In most cases the major enlargement persists toward the left, and thus a pulsatile mass can be detected by palpation to the left of the midline. A much smaller group of patients show a major expansion toward the right. Because of the initial enlargement anteriorly, lateral X-ray films of the abdomen are most helpful in the early diagnosis of the lesions, since, when calcification is present in the aortic wall, the calcific deposits can best be seen in this view and frequently show an accurate outline of the aneurysm (figure 1). When dilatation of the aorta has occurred, the hemodynamic mechanism enters a cycle of increasing lateral pressure in the region of the aneurysm, which continues until rupture occurs. The attachment of the aorta posteriorly to the anterior vertebral ligament is frequently accentuated as the aorta enlarges between the posterior aortic wall and the left posterolateral margin of the aneurysm. These attachments may form a dense and unyielding band to the vertebral bodies. At the junction point of this supported area and the anterolateral wall of the aneurysm there is an area of maximal stress. This area is retroperitoneal, and it is at this point just anterior to the dense fibrotic attachments to the vertebral bodies that rupture is most common.

When rupture has been initiated by a disruption of the continuity of the wall in this area blood extravasates retroperitoneally into the left flank and may extend laterally to the region of the kidney and then downward along the psoas muscle to the groin. Frequently there is also involvement of the mesentery of the descending colon; thus, not uncommonly pain radiates into the groin, testicle, or rectum. Retroperitoneal hematoma may then present as a pulsating mass in the flank or abdomen laterally.[2] As the blood pressure falls, as the result of major hemorrhage, the patient may be unconscious or in shock or both; or if tamponade occurs, associated with a relatively small amount of bleeding, pain may be the primary presenting complaint. If the rent is very large it is possible for exsanguinating hemorrhage to occur in the first episode, but this is not the usual course. In the vast majority of cases

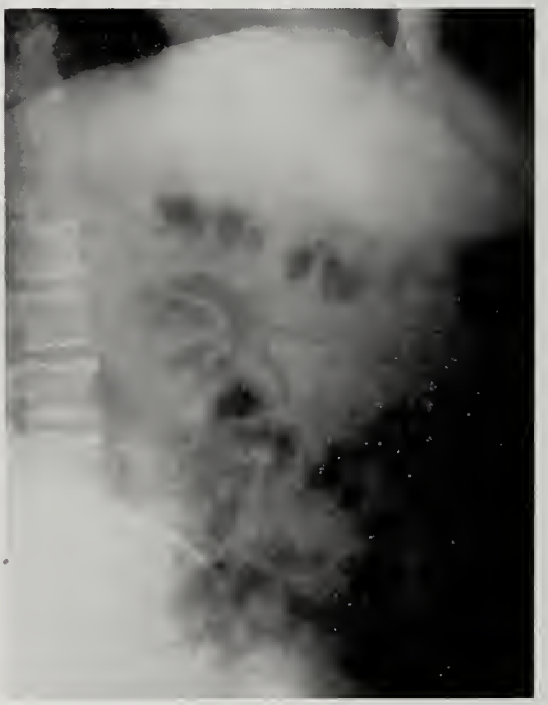

FIG. 1. Lateral projection showing calcium in aneurysmal sac.

tamponade lasting hours or days may occur. Usually bleeding resumes after relatively short periods of cessation, these being usually of hours' duration. Once bleeding has been initiated, however, the occurrence of hemorrhage is certain.

In the less common instances in which the aneurysm enlarges primarily to the right a similar sequence of events can occur in which there may be retroperitoneal hemorrhage; however, in this situation there may be also extension into the mesentery of the small bowel. When the aneurysm extends primarily to the right it tends to become intimately adherent to the vena cava. The point of maximal adherence to the vena cava in most all aneurysms regardless of their direction of presentation tends to be at the level of the bifurcation and just proximal to this point. In rare instances the aneurysm may rupture into the vena cava itself. This creates a major arteriovenous fistula. This fistula may then spontaneously enlarge because of the friable character of the vascular wall which has been involved with the disease process, and the patient may not show major signs of previous rupture or hemorrhage since the aneurysm has decompressed itself into the vena cava. High output failure may be the initial manifestation of this problem. We have seen only 2 such arteriovenous fistulae secondary to aneurysmal rupture. In the past 18 months 15 patients have had resections of aneurysms with the preoperative diagnosis of rupture. In all cases the diagnosis was correct at operation, and 10 of these patients had resections which were successful, with subsequent discharge from the hospital in satisfactory condition. It was possible to salvage this number of patients even though all the patients in this group had massive blood loss and shock for periods varying from 1 or 2 hours to as long as 15 hours prior to the time that they were admitted. Of the 5 patients who died 4 succumbed in the postoperative period, on the third to the twelfth day, of complications secondary to generalized arteriosclerosis and shock. Two of the 4 patients died of myocardial infarction, 1 just prior to the time the patient had been thought ready for discharge, and 2 from lower nephron nephrosis with anuria. Prolonged periods of shock prior to the recognition of the condition undoubtedly contributed to the renal and myocardial problems in patients who already had the underlying disease. One patient succumbed in the operating room from a rare complication. He had a large abdominal aneurysm which had ruptured into the inferior vena cava. During the course of the resection and before the fistula could be clamped part of the clot which partially filled the aneurysm broke free from the aortic wall, passed into the inferior vena cava, and passed into the pulmonary artery as a large pulmonary embolus. This produced acute right-sided heart failure resulting in death. The second patient who had an arteriovenous fistula as a result of aneurysmal rupture had a successful operation and is living and well more than 1 year after operation.

Rupture of an abdominal aneurysm is therefore a grave complication, which when untreated inevitably leads to death. The occurrence of rupture, however, is not a hopeless situation, and in this group of patients $^2\!/_3$ had successful operations and were able to return to their previous state of health. The rate of survival from the operation can be improved if the diagnosis is suspected earlier and patients are operated on before prolonged periods of shock with concomitant ischemia cause irretrievable metabolic changes.

Discussion

Each patient with a ruptured abdominal aneurysm presents specific problems of preoperative preparation, operative technic, and postoperative care which involve not only the process of aortic rupture itself, but also the management of the critically ill patient with widespread arteriosclerotic problems. To successfully meet the many aspects of this situation coördinated teamwork with wide experience and full knowledge of the many variants of the pathologic process is required. The obscuring of the usual anatomic landmarks by hemorrhage accentuates the problem. The goal must be the early control of hemorrhage in the patient who is continuing to bleed, but involvement of the renal artery and venous abnormality are additional hazards which face the surgeon who must treat the emergency. These are all surmountable obstacles in experienced hands. Early diagnosis is the most important single factor in the survival of the patient, but the diagnosis of a ruptured aneurysm is often not clear to the initial observer. If the patient has already been known to have an abdominal aneurysm the likelihood of a rapid and correct diagnosis of rupture is great. However, when there is no previous knowledge of the aneurysm the myocardial ischemia following a fall in blood pressure may erroneously lead to a diagnosis of myocardial infarction. In others, the abdominal pain and back pain may mimic an intra-abdominal crisis, such as a perforated viscus or retroperitoneal pancreatitis.

In the occasional case of a patient with dissection of the hematoma downward along the psoas muscle retroperitoneally, a urologist may initially be contacted because of suspected renal colic. In each of these situations a laterally pulsatile mass, gradually increasing in size, will usually lead to a correct diagnosis.

Because of the urgency of the situation, preoperative studies usually carried out to determine the status of the kidney, liver and myocardium cannot be performed. In addition, the usual precaution of hypothermizing these patients to 30 to 31°C cannot be attained when the patient is initially anesthetized. In elective resections hypothermia protects the organism, and particularly the kidneys, if perchance cross-clamping of the renal arteries is necessitated in resecting the aneurysm itself. However, in these acute problems we utilize an osmolar diuresis of mannitol solution to attain a renal diuresis prior to cross-clamping the aorta above the neck of the aneurysm. It is surprising that of these patients predisposed to renal shutdown by a period of hypotension and acute blood loss such a small number have died.

As the longevity of the population increases these problems will increase in a similar manner. Thus, the awareness of aneurysms and their possible rupture should be acute in physicians caring for patients beyond the fourth decade of life.

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Laboratory Surveillance of Hospital Staphylococcal Problems*

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THE ADVENT of antimicrobial therapy with the subsequent rapid emergence of resistant strains has placed in its true perspective the role played by *Staphylococcus aureus* in hospital cross-infections. The theory that hospital-acquired staphylococcal infections are self-generated is no longer tenable, since strain-differentiation through antibiotic sensitivity patterns (antibiograms)[1] and bacteriophage typing[2, 3, 4] has enabled the epidemiologist to delineate foci of infection.

The usual hospital laboratory is not adequately staffed to cope with the deluge of clinical material coincident with the epidemiologic investigation of a staphylococcal disease outbreak. The ease with which specimens can be collected, the necessity for large-scale sampling, and the ubiquitous coccal flora encountered soon overwhelm the bacteriology laboratory to the detriment of both routine work and the evaluation of survey material. Nevertheless, staphylococcal problems within the hospital can be controlled only by constant surveillance of the "submerged part of the iceberg." This report describes a procedure which will enable the hospital laboratory to provide effective support for epidemiologic investigation of hospital-acquired staphylococcal infections during epidemic and interepidemic periods.

Hospital surveillance during epidemic situations. Since the hospital can never be free from staphylococci, it is constantly in transition from (1) epidemic status, during which time obvious hospital-acquired disease is prevalent and recognizable, to (2) a nonepidemic period, when all on the surface appears to be going well. It is during this latter time that complacency, carelessness and poor sanitation practices will soon lead to rapid colonization and establishment of staphylococcal strains particularly suited for the hospital environment. Although there was little evidence to indicate an outbreak of epidemic disease in a hospital observed for 2 years by this laboratory, the prevalence of staphylococcal strains of the 80/81 phage type rarely dropped below 10 per cent of all strains isolated from clinical material. This strain appeared to be either "seeded" or "carried" throughout the hospital. Practically all hospitals have their "hospital strains" which now are becoming "community strains" and pose additional problems by being reintroduced into the clean hospital environment by an incoming patient. Since there may be as many as 5 resident staphylococcal strains present simultaneously in the hospital, careful nonepidemic surveillance to recognize cross-infection must be maintained in order to abort overt outbreaks of disease.

The first indication of an impending outbreak in the hospital is usually an increasing incidence of infections among infants after discharge from the nursery. Often the appearance of mastitis in mothers or increasing breakdown of surgical incisions due to staphylococcal infections sounds the alarm. These signs demand immediate action. Too often this is poorly planned so that a tremendous amount of pointless work is expended. The ubiquitous staphylococci found in all hospital environments require that a plan of investigation be outlined which will determine whether the outbreak is due to one or several strains. Clearly, the investigation must be controlled by an epidemiologist to avoid a helter-skelter submission of illogical specimens, or else evaluation of data from the many specimens collected will be extremely difficult and perhaps impossible. The staff bacteriologist may be the logical one for this responsibility.

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We have found the following plan to be an effective means of supplying the epidemiologist and clinicians with laboratory information:

a. An active Hospital Infections Committee is the essential focal point which arranges for a single, central file to contain complete and current records of all staphylococcal infections among patients. All hospital staphylococcal infections should be assumed to be hospital-acquired until proven otherwise. Constant examination of this file enables the epidemiologist to determine areas and extent of cross-infection. However, these data are of full value only through the conscientious reporting of all infections occurring either during hospitalization or subsequent to discharge. *Staphylococcus aureus* infections, as well as any survey data, must be segregated and recorded in this file by hospital wards on a current basis.

b. Cultures from a representative number of patients with hospital-acquired disease must be completely characterized to determine the number of strains involved in the outbreak. Biological characteristics of suspect strains as regards coagulase,[5, 6] pigment and hemolysin[7-10] production, as well as complete antibiograms, are necessary for defining the offending strain. Only staphylococci from clinical material should be examined during the initial phase, and when a common pattern of biological properties and antimicrobial sensitivities emerges, the identity of strains must be confirmed by bacteriophage typing. It is not unusual that careful evaluation of the routine day-to-day laboratory isolates will give the first indication of the outbreak.

c. When an unusual number of staphylococci exhibiting the same phage pattern are present the investigation must extend next to possible carriers. Specimens should include nasal and perineal swabs on all ward personnel and nasal and umbilical or groin cultures on infants. Finally, cultures should be taken on each infant just prior to discharge from the hospital. At this point it is of particular advantage to the laboratory as well as the epidemiologist if a medium can be used which will (1) selectively allow growth of the offending strain, (2) exclude a majority of the ubiquitous staphylococci and Micrococcus species encountered, and (3) yield preliminary identification within 48 hours. Chapman[11] described a medium (mannitol salt agar [MSA]) which has been used to good advantage during surveys for the selective isolation of *Staphylococcus aureus* based on the ability of this organism to tolerate a high salt concentration and to ferment mannitol. However, nonpathogenic *Staphylococcus epidermidis* (formerly *Staphylococcus albus*) and mannitol-positive Micrococcus species also grow well on this medium, and, therefore, suspect colonies require further differentiation by demonstration of coagulase or deoxyribonuclease (DNAse).

A medium used to excellent advantage and fulfilling the above requirements was obtained by adding 1 unit of penicillin G per ml. of MSA. The resulting medium was selective for penicillin-resistant staphylococci, which are responsible for most hospital outbreaks,[12] while eliminating the vast majority of coagulase- or DNAse-negative staphylococci and Micrococcus species frequently encountered in these specimens. During one survey, substitution of the penicillin-mannitol salt agar (PMSA) for MSA reduced by more than 70 per cent the number of plates requiring bacteriologic follow-up. Thus, employment of the more selective PMSA medium enabled comprehensive survey culturing of staff, patients and fomites which would not have been feasible using MSA alone. It is obvious that an isolation medium of this type, when taken alone, can be used only for surveying the environment for certain penicillin-resistant strains and only then after it has been determined by testing on the PMSA medium that the offending staphylococcal strain will grow well in the concentration of penicillin used. Complete antibiogram determinations on strains responsible for outbreaks may indicate that other agents could be used to better advantage.[13]

Staphylococcus aureus appears as yellow colonies on the red MSA and PMSA media. The presence of such colonies indicates possible sources of staphylococcal cross-infection and must be confirmed by demonstrating coagulase or DNAse activity, since only those staphylococcal colonies which are DNAse (coagulase)-positive need be further characterized and phage-typed. Using DiSalvo's DNA medium[14] we have found better than 99 per cent correlation between staphylococcal DNAse and coagulase activity; therefore, this laboratory uses DNAse activity routinely as a prerequisite for phage typability of staphylococcal strains. Also, the DNAse test appears to be less susceptible to inimical environmental factors such as dirty glassware, plasma differences, etc., which might produce false-negative reactions in the coagulase test.

During epidemic periods use of PMSA (or MSA) and the DNAse (coagulase) tests followed by confirmation of strain identities by phage-typing is required for the mandatory weekly surveillance of ward personnel for the presence of offending strains in the anterior nares. PMSA plates are supplied by the laboratory for culturing of all staff personnel by the ward physician, whereupon the plates are immediately returned to the laboratory for evaluation. The appearance of strain(s) associated with the outbreak from these sources serves to alert the doctor and epidemiologist. Robinson et al[15] found antibiotic ointment to be effective in controlling the nasal-carried state in ward personnel. However, inasmuch as recolonization of the anterior nares may be rapid,[16] it follows that all foci of infection must be eliminated from the environment concurrently with treatment of nasal carriers.

Fomites. The role of fomite-borne staphylococci as foci of disease is not clear, inasmuch as tests have shown that physiologic processes of strains exposed to desiccation for a short time are considerably altered and virulence is lowered,[17, 18] but until fomites can be eliminated as contributing to infection or disease a check of the fomite-staphylococcal flora during disease outbreaks is necessary and will provide important information relative to efficacy of aseptic technics and housekeeping methods. Specimens for culture are collected (on sterile swabs moistened with saline) from objects in areas designated by the epidemiologist's plan of investigation. PMSA media are inoculated with the swabs and observed for the tell-tale appearance of yellow colonies indicating staphylococcal seeding of these areas by carriers or patients or through poor sanitary practices of the housekeeping personnel. For example, cultures from isolettes and scales in the nursery may show that the most susceptible hospital patients (for staphylococcal infection) are being unnecessarily exposed to high concentrations of coagulase-positive staphylococci. Plastic furniture, television knobs, magazines, etc. in the lounge for dermatology patients may abound with staphylococci which come in contact with patients presenting a superabundance of entry portals for these organisms. Uniform distribution of staphylococci on the floor might be traced to the mop or mop water if adequate disinfectants are not used. Characterization of the staphylococci isolated may lead to the source(s) of dissemination or indicate numerous avenues of cross-infection. In the latter case little enlightenment will be gained from further bacteriologic investigation until the obvious breaks in sanitation are eliminated.

Surveillance in nonepidemic or postepidemic situations. Survey methodology during interepidemic periods, though limited, must nevertheless be adequate for rapid recognition of potential trouble areas. PMSA plates (used in addition to nonselective media) inoculated with routinely-acquired clinical material furnish valuable information for both the clinician and the epidemiologist: (1) The appearance of colonies on the PMSA medium tells the clinician that he is dealing with a penicillin-resistant staphylococcus, and the epidemiologist is alerted to the presence of a staphylococcal strain potentially capable of causing epidemic disease; (2) staphylococcal colonies appearing on nonselective media but absent on PMSA indicate a strain amenable to penicillin treatment and less apt to be the source of an outbreak of cross-infections.

Intelligent surveillance requires that careful account be taken of all staphylococci isolated during routine clinical work-up of patients. Pertinent reports must be channeled through the epidemiologist for overall evaluation in order for him to keep the Hospital Infections Committee informed as to the prevalence of staphylococcal strains extant at any time. This important source of epidemiologic information can be useful only if conscientious efforts are being made to culture and report all infected lesions and incisions, including systematic detection and follow-up of disease occurring in recently discharged patients or their families.

The nasal carrier status of ward personnel (including physicians) in the more sensitive services such as obstetrics, surgery, pediatrics and dermatology should be determined at least monthly, preferably bimonthly, using PMSA, and through phage-typing the relation of carrier strains to staphylococci isolated from patients can be determined. "Closing the gate after the horse has run away" has no better application or less excuse than when applied to epidemiologic control of hospital staphylococcal problems. As part of the control exercised in the nursery, groin or umbilical cultures taken on infants just prior to discharge from the hospital provide valuable information as to the status of staphylococcal flora in the environment they are leaving. The advisability of using antimicrobial agents in MSA for collection of these interepidemic survey specimens is subject to obvious limitations. However, constant characterization of routine isolates from clinical specimens on nonselective media will alert the epidemiologist to the rare outbreak of disease caused by penicillin-sensitive staphylococci. Since the vast majority of staphylococci responsible for cross-infection in the hospital environment are penicillin-resistant, use of the more selective medium allows full laboratory support in exercising a wider scope of epidemiologic control.

SUMMARY

A plan is presented for maintaining epidemiologic surveillance of staphylococcal problems in the hospital during epidemic and nonepidemic periods. Efficient use of routine laboratory and clinical data and methods used to acquire information needed to characterize and define offending staphylococcal strains are discussed. The added efficiency derived from the use of selective culture media designed to exclude extraneous microbial flora present in survey specimens enables full laboratory support for exercising a wider scope of epidemiologic control.

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(*Continued on page 757*)

Traction in Transit

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"SPLINT THEM WHERE THEY LIE" is a surgical maxim which, in application, has saved many a broken limb from additional injury incident to transportation.

With the ever-increasing number of motor vehicles, collisions resulting in severe injuries are very frequent. Sudden stops and rear-end collisions often produce what are known as "whiplash" injuries. These may vary from mild sprains of cervical muscles and ligaments to severe fractures and/or dislocations of cervical vertebrae. The seriousness of the lesion may not be apparent at the time the ambulance arrives to transport the victim to the hospital. Thus, if there is a fracture or dislocation, there is danger of additional injury to nerves and blood vessels from compression during the ride to the hospital even if brief. Reflex spasm of muscles may close down foramina enough to impinge on nerve roots and compress blood vessels, causing edema. The movement of the ambulance, often very violent because of the mistaken notion that speed is paramount, may add insult to injury, so that on arrival at the hospital the victim may be in a very serious condition.

What is the treatment most frequently prescribed for the victim of a cervical lesion or a fractured limb? The answer is traction. By gently pulling on the cervical spine, spastic muscles are relaxed, crowded nerves are given more room, displaced vertebrae are aligned, and support is given to the head. A fractured limb may also benefit by traction, by overcoming muscle spasm and aligning the fractured and displaced fragments.

If traction is a desirable treatment for cervical injuries or limb fractures, why wait until the patient reaches the hospital? Why not apply traction in transit? By means of a spring reel attached to the litter either the head or a limb can be supported while being transported. Ambulance attendants can be trained to apply either a head-halter for cervical injuries or an anklet for leg injuries and attach the reel. By means of a handle the tension of the spring can be adjusted to comfort. During the ride the patient will be comfortable, spared additional injury, and, with the traction intact, moved to the X-ray room if that is desired immediately on arrival at the hospital.

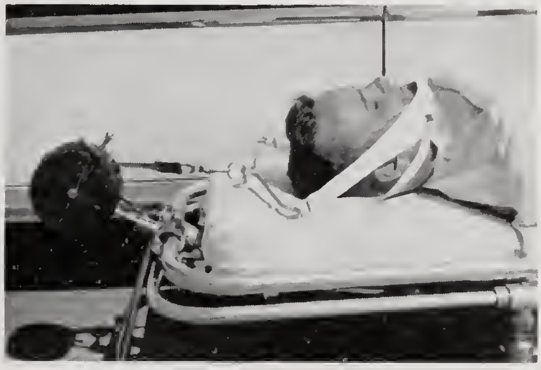

FIG. 1. A head-halter has been applied and a spring reel attached to the head end of the litter. Traction will be maintained while the patient is being transported.

The physician can then continue the traction from the hospital bed. If the X-ray film shows that the traction should not be relaxed even temporarily, the litter with the traction in place can be left on the hospital bed and removed at a later date.

Ambulance attendants are now taught to administer oxygen, pillow-splint limbs, and the use of resuscitation apparatus. Thus, the application of traction would not be a difficult problem once the apparatus needed is available.

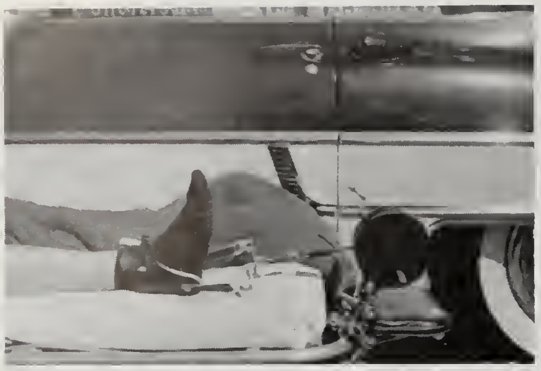

Fig. 2. Traction is being applied to the limb by means of an anklet and a spring reel attached to the foot end of the litter. Traction can be maintained while the patient is being transported to the hospital.

Each ambulance could carry a small kit consisting of a head-halter and spreader and a few traction anklets together with a spring reel easily clamped to the litter as shown in figures 1 and 2.

When the victim of an accident is picked up and placed on the ambulance litter, whether a physician is present or not, a head or neck injury should be sufficient indication to apply a halter and attach the traction reel. Similarly, an injured extremity could be placed in traction with the use of an anklet and reel. All ambulance attendants should have a course in first-aid care, and the use of traction with this apparatus could be easily learned.

"Traction in transit" is suggested as an improvement over "splint them where they lie" for fractured limbs and, perhaps, a life-saver for severe cervical fractures or dislocations.

The Use of Chlordiazepoxide to Allay Preoperative Apprehension in Abrasive Surgery

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ALMOST A DECADE has passed since Kurtin[1] first introduced the method of abrasive surgery which is in common use today. Hundreds of thousands of individuals who, prior to the Kurtin operation, had considered their cosmetic defects unremediable have been made happier because of this relatively simple office procedure.

The original method of wire-brush surgery has undergone many refinements. (It must be noted that Kurtin's prototype equipment was originally purchased in hardware stores and dental supply houses.) Diamond and ruby wheels, steel, and tungsten carbide fraises were substituted for Kurtin's steel brushes and are preferred by some operators. These and other minor changes made it easier for the operator but not the patient.

The first improvement which made the operation easier for the patient was the substitution of freon for ethyl chloride as the freezing agent.[2] The blower which was necessary to hasten the evaporation of ethyl chloride was an emotional hazard. The force of the air-stream made it difficult for the patient to breathe, and that in conjunction with its raucous operative drone was to many patients a frightening experience.

The capillary oozing with subsequent crusting which made it difficult to open one's mouth was improved slightly with the introduction of the use of hemostatic agents.[3] The edema which was a sequel to the abrasive technic and which was frequently severe enough to swell the eyelids so that they became tightly shut for a day or so was diminished by the use of chymotrypsin.[4]

These technical improvements made it easier for the patient, but the greatest emotional hazard, the fear of anticipation, had to be dealt with in other ways. Many sedatives, analgesics and tranquilizing drugs had all been tried. In many patients their use was of considerable benefit; but many of them had untoward reactions. Sedatives, in doses adequate to allay apprehension, left the patient dazed after the operation and frequently too sleepy to go home. The stronger analgesics frequently produced nausea and vomiting. The meprobamates were not very effective in my hands, and in 1 case in which Compazine was used it produced a temporary cardiac arrest. When chlordiazepoxide was introduced, which was more potent and considerably longer-acting as a central relaxant, and which had been reported as practically free from harmful side-effects, it seemed worth-while to test its action as a means of allaying the preoperative apprehension and anxiety.

Chemistry. Librium* is a member of a new series of potent, centrally-acting psychopharmacologic agents and 1,4-benzodiazepines, which are completely unrelated to other drugs currently in use in the fields of psychosomatic medicine and psychiatry.[5] Chemically, chlordiazepoxide is 7-chloro-2-methylamino-5-phenyl-3H-1,4-benzodiazepine 4-oxide hydrochloride with the following structural formula:

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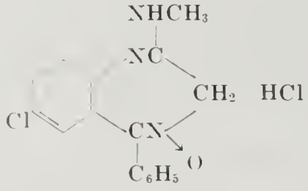
* Librium, brand of chlordiazepoxide, was supplied through the courtesy of Hoffmann-La Roche, Inc., Nutley, New Jersey.



Pharmacology. Pharmacologic studies reported by Randall[6] and Randall et al[7] show that chlordiazepoxide exerts calming, muscle relaxant and sedative effects but is at least 10 to 20 times more potent than meprobamate as a central relaxant and is considerably longer-acting. It tamed normally aggressive monkeys in doses that did not depress general activity or avoidance behavior and had a calming effect on wild cats as well as on rats made irritable by lesions in the septal area of the brain. This calming action was more clear-cut than that observed with either meprobamate or the derivatives of phenothiazine. However, unlike meprobamate, sedative doses of chlordiazepoxide do not produce hypnosis, or autonomic blocking.

Clinically, chlordiazepoxide has been reported to be remarkably free from harmful side-effects.[8-13] The marked calming and relaxing effects of the drug as well as its freedom from toxicity indicated that it would be a useful preoperative medication to allay apprehension and anxiety in abrasive surgery (skin-planing).

METHODS AND PATIENT MATERIAL

Fourteen patients, 20 to 40 years of age, with cosmetic defects that required abrasive surgery were used to assess the desirability of administering preoperative medication prior to the planing procedure. Nine were females and 5 were males. All were psychologically normal, if one considers the rather wide range of emotional normality. Yet, each could be considered to be in a special emotional category, since the motivation for surgery was cosmetic, and, when submitting to the operation, each exercised election. This is in contrast to the emotional status of patients who must sacrifice voluntary decision when undergoing surgical procedures that are necessary to save a life. Since abrasive surgery is done without general anesthesia, each patient in this study exhibited varying degrees of apprehension directed toward either the anticipated ordeal or the final results of the procedure.

All patients served as their own controls, since abrasive surgery is done at more than one sitting. The first planing was carried out without administering chlordiazepoxide preoperatively to allay fear, apprehension or anxiety, which, although evident, were not sufficiently severe as to constitute a hazard. Six to 10 weeks after the first planing each of the 14 patients underwent a second procedure. Before surgery, however, each was instructed to take one 10 mg. capsule of chlordiazepoxide the night before and a second capsule in the morning. Ten of the 14 patients were operated on prior to 10:30 a.m. The remaining 4 patients were given a third capsule ½ to 1 hour before surgery at or after 11:00 a.m. It was not considered necessary to carry out toxicologic studies, since a total dose of 20 mg. was given to 10 patients and 30 mg. to 4.

RESULTS

After the first planing 10 of the 14 patients stated they would not undergo a second abrasive procedure. This reaction is not uncommon and was expected. Experience has shown that only a small number of patients persist in their refusal to undergo a second planing once they have had an opportunity to evaluate the benefits derived from the operation. However, prior to the second planing, apprehension and anxiety were noticeably decreased in all patients. Four actually fell asleep during the preliminary chilling period, i.e., 20 minutes before planing.

One of 2 patients who complained of being too relaxed also felt "detached and remote."

Because of the relaxed condition of the patient, it was much easier to perform the planings at the second sitting than it was on the first. In addition, none of the patients stated, "This is my last planing." However, the 1 patient who complained of feeling detached and remote stated that she would prefer not to be under the influence of the drug when she underwent her third planing. The little fear she had experienced on the first sitting was preferable to the sensations she experienced with chlordiazepoxide.

Summary

Fourteen patients serving as their own controls underwent abrasive surgery. The first operation on each was performed without the use of chlordiazepoxide, and the second operation was preceded by the administration of small doses of the drug. In 13 of the 14 patients the use of the drug produced satisfactory results in that it diminished preoperative apprehension and anxiety.

No harmful side-effects were seen, and, since the doses administered were so small, toxicologic studies were unnecessary.

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Clinical Evaluation of Betamethasone, a New Steroid in Dermatology

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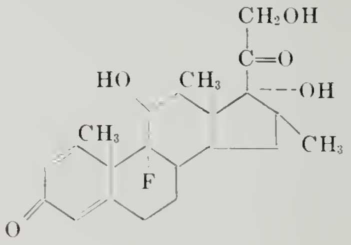
The indispensable role of the corticosteroids and the antibiotics in the daily practice of dermatology often leads one to forget that only two decades ago neither of these therapeutic groups had come into clinical usage. This is particularly true of the corticosteroids, which, in little over a decade, have become the most widely used drugs in dermatology. It would be difficult to find a more apt description of their value than that offered recently by Goldman[1]: "They are the only means at our disposal to prolong the lives of patients with otherwise rapidly fatal diseases, such as systemic lupus erythematosus and pemphigus. They are the best means at our disposal to minimize physical discomfort and socioeconomic hardships in many severe and sometimes disabling dermatoses. . . ."

Although the corticosteroids have been used widely and studied intensively in their relatively short existence, their full potential is far from realized. Thus, it is not surprising that pharmaceutical chemists are still hard at work to improve the corticosteroid molecule, while, at the same time, clinicians are attempting to find new applications for these agents and to improve methods of usage in established areas.

Betamethasone,* a prednisolone derivative, is the most recent corticosteroid studied by our group. Betamethasone is 9-alpha-fluoro-16-beta-methylprednisolone.



Betamethasone

In animal studies,[2] in which eosinophil response and thymus involution were used, betamethasone proved to have a substantially higher potency than the parent compound, while early clinical studies[3, 4] suggested that this corticosteroid is capable of exerting a more rapid anti-inflammatory and anti-allergic effect than other analogues. These studies also suggested that betamethasone treatment is not associated with new or unusual, untoward manifestations.

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* The betamethasone used in this study was made available as Celestone by Schering Corporation, Bloomfield, New Jersey.

An early finding was that the administration of betamethasone may be followed by an increase in sodium output.[5]

Objective of Study

The primary objective of this study was to evaluate the therapeutic action and side-effects of betamethasone in the many acute and short-term disorders encountered in daily dermatologic practice. The decision to devote most of this study to short-term conditions was based upon the fact that they account for the greatest proportion of conditions suitable for steroid therapy. We include under the designation of "short-term steroid therapy" not only acute cases in which corticosteroids are given for 2 to 3 weeks, but all those in which up to 6 months of treatment may be required to obtain the desired therapeutic result. Since much of the success of steroid therapy depends upon proper usage of the compound, particularly the establishment of the lowest dosage that will elicit the desired response so as to minimize the side-effect potential, various dosage schemes were studied to set up some guidelines for an ideal regimen.

Materials and Methods

Betamethasone was given, in the form of 0.6 mg. tablets, to 201 patients from our private practice. To avoid overlapping of hormonal effects, an effort was made to select patients who had not been on corticosteroids for a minimum of 6 months prior to being placed on betamethasone. The small number of patients who were transferred directly from other steroids to betamethasone had responded inadequately to the older compounds. This afforded us an opportunity to observe whether betamethasone would be of use in patients who respond poorly to other steroids. There were 74 males and 127 females in our series. Their ages ranged from 2 to 77 years. As might be expected, contact dermatitis, atopic dermatitis, and the various eczemata accounted for the majority of our cases.

Patients were carefully observed for the possible occurrence of side-effects. In addition to a thorough physical examination, routine urinalyses as well as blood work-ups were carried out prior to and at the end of therapy. The therapeutic results observed were recorded as "excellent" when response was more rapid than that generally expected with corticosteroids or when improvement was satisfactory following an unsatisfactory course with another steroid; as "good" when response paralleled that generally seen with steroids; and as "fair" when improvement was less than that expected with these compounds.

Results

The results with betamethasone were rather impressive and exceeded those usually expected with the use of corticosteroids. As the results in table 1 show, based upon the criteria outlined, 197 (98 per cent) of the 201 cases in this series had a good-to-excellent response, while the results were fair in only 4 patients (2 per cent). There were no complete failures, which may be due to the fact that only steroid-responsive conditions were included in this study. Symptomatic relief occurred particularly early in edematous and intensely pruritic dermatoses; these manifestations were usually suppressed within 24 to 48 hours. As is true with all steroids, the results produced by betamethasone in seborrheic dermatitis are only temporary, with every interruption of treatment for more than a few days resulting in complete relapse.

Of the various dosage schemes evaluated during this study, a regimen of 1 tablet t.i.d. (1.8 mg. daily) for 5 days, 1 tablet b.i.d. (1.2 mg. daily) for an additional 5 days, and $\frac{1}{2}$ tablet b.i.d. (0.6 mg. daily) for as long as required proved most satisfactory in the majority of short-term disorders. In severe cases or acute exacerbations, a better response may be obtained with initial dosages of 1 tablet q.i.d. or q.4 h. These higher initial dosages produce more rapid symptomatic relief, particularly from the acute discomfort

TABLE 1

Response of 201 Patients on Betamethasone Therapy

Patients on "Common Dosage Regimens"

No. of Cases	Sex		Condition	Duration of Therapy	Results		
	M*	F†			Excel-lent	Good	Fair
41	10	31	Eczema	2 wks.–9 mos. (a.‡ 4 mos.)	18	22	1
3	2	1	Nummular eczema	3–5 wks.	2	1	
5	1	4	Contact dermatitis of hands (detergents)	3–13 wks. (a.10 wks.)	1	4	
1		1	axillary (deodorant)	6 wks.	1		
1		1	industrial (paint)	2 mos.		1	
19	9	10	poison ivy	6 days–3 wks. (a.1 wk.)	12	7	
16	7	9	generalized (misc. contactants)	2 wks.–9 mos. (a.10 wks.)	5	11	
35	12	23	Atopic dermatitis	2 wks.–9 mos. (a.4 mos.)	13	21	1
3		3	Dermatitis medicamentosa	4 wks.–5 mos. (a.3 mos.)		3	
2		2	Dermatitis repens	2, 4 wks.	1	1	
2	1	1	Urticaria	2, 6 wks.	1	1	
5	3	2	Seborrheic dermatitis	6 wks.–7 mos. (a.4 mos.)		5	
8	5	3	Stasis ulcers	2 wks.–9 mos. (a.4 mos.)	2	6	
7		7	Neurodermatitis	2 wks.–4 mos. (a.2 mos.)	1	5	1
6	4	2	Lichen planus	4 wks.–3 mos. (a.6 wks.)	5	1	
9	2	7	Psoriasis	1 wk.–9 mos. (a. 4 mos.)		9	
1	1		Psoriasiform eruption	3 mos.		1	
3	1	2	Dermatophytosis (for severe edema and pruritus)	2 mos.		3	
3	2	1	Polymorphous light eruption	1 wk.–5 wks. (a. 3 wks.)		3	
2		2	Pemphigus vulgaris	4 wks., 4 mos.	2		
1		1	Alopecia areata	7 mos.		1	
1		1	Keratolysis exfoliativa	7 mos.		1	
1		1	Lupus erythematosus	2 mos.	1		
3	2	1	Acne vulgaris	1 wk.–2 mos. (a.1 mo.)		2	1
4	2	2	Erythema solare	6 days	3	1	
1		1	Morphea	2 wks.		1	
18	9	9	Poison ivy dermatitis	6 days	18		
TOTALS	73	128			86	111	4

* Aged 17–70 yrs.

† Aged 2–77 yrs.

‡ Average.

associated with severe flare-ups. The total duration of treatment required varied from 1 week in some contact dermatoses to several months in long-standing, severe eczematous eruptions.

We have recently also tried a "6-day regimen" of betamethasone in the management of severe, widespread poison ivy dermatitis. The dosage schedule consisted of 1 tablet q. 4 h. the first day, q. 6 h. the second, q. 8 h. the third, q. 12 h. the fourth, and once daily the fifth and sixth days. The rationale for this dosage regimen was based upon the fact that widespread poison ivy dermatitis is associated with exceptionally severe discomfort and that a heavy initial dosage may result in more rapid suppression of symptoms, including inflammation, and thus provide more prompt relief as well as abbreviate the overall length of treatment required. This theory was borne out at least in the small series of 18 cases treated by this method. A high degree of relief from pruritus occurred, and regression of lesions began in all cases within 24 hours; by the sixth day no evidence of the disease process was visible. This appears to be an excellent regimen for poison ivy dermatitis and should also be tried in other contact dermatoses.

With the exception of a small number of cases of weight gain associated with increased appetite, no side-effects attributable to betamethasone were seen during this study. A small proportion of patients exhibited a feeling of well-being which reached desirable levels; that is, it was never sufficiently intense to be classified as euphoria but provided an improvement in mood in patients who had been depressed as a result of their dermatologic condition. All laboratory parameters remained within normal ranges. Considerably longer studies involving larger numbers of patients would, of course, be necessary to establish whether betamethasone, like other steroids, is capable of causing such long-term untoward manifestations as osteoporosis and compression fractures.

Some interesting observations made in small numbers of patients are reported here in the hope that they will stimulate further investigation by other workers. Betamethasone was employed, in conjunction with griseofulvin, in 3 cases of dermatophytosis with exceptionally severe edema and pruritus; the desired symptomatic relief was achieved, and no interference with the action of the antibiotic was noted. The steroid was also used in conjunction with broad-spectrum antibiotics in 6 patients with infectious dermatoses. Here, again, no incompatibility between corticosteroid and antibiotics was noted. The response elicited with betamethasone in 5 of the 6 lichen planus cases was exceptionally good. Four of these patients had received other therapy for 3 to 6 months without any benefit. Following administration of betamethasone, lesions began fading within 24 to 72 hours, and disappeared completely within 4 to 6 weeks. No recurrence has been seen to date. The 2 cases of pemphigus vulgaris in our series were controlled with 3 and 4 tablets daily during flare-ups, and have been maintained for the past 8 months on 2 and 3 tablets a day, respectively. The first of these patients had previously required 30 mg. daily of prednisone and then 3 mg. daily of dexamethasone. A number of patients reported a significant increase in diuresis, suggesting possible shedding of excess sodium, as had been previously reported by another group.

COMMENT

Our preliminary findings with the use of betamethasone in dermatologic disorders are highly encouraging. Although our series comprises only 201 patients and our study has been in progress for the relatively short period of 1 year, 3 major clinical advantages have become apparent: the almost uniform effectiveness at substantially lower dosages than those required with its predecessors, the lack of significant hormonal side-effects, and the ability of this steroid to produce a satisfactory response after other corticosteroids have proved inadequate. If more prolonged studies confirm these initial observations, the development of betamethasone will represent a most important advance in corticosteroid therapy, perhaps the most important since the discovery of prednisone and prednisolone. It is, however, well to remember that until and unless long-term studies confirm the initial findings, betamethasone, as other steroids, should not be used lightly, since it carries with it the potential for causing the undesirable steroid manifestations which, in some cases, may more than offset the therapeutic gains.

SUMMARY

A new prednisolone derivative, betamethasone, was studied in 201 patients with commonly seen dermatologic disorders. The majority were short-term cases.

Therapeutic results ranging from good to excellent were seen in 197 or 98 per cent of patients; results were fair in only 4 patients, or 2

(Continued on page 758)

Use of Phenothiazines in Alcoholic Agitation

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ANXIETY AND TENSION are marked in most chronic alcoholics but are concealed as long as intoxication can be maintained. During abrupt withdrawal the emergent anxiety often takes the form of an almost manic excitement. The victim is unmanageable and a menace to himself and to those around him. When a physician is called, his first responsibility obviously is to bring the patient under physical control. Many drugs have been used for this purpose, among them the phenothiazine derivatives. We have used perphenazine (Trilafon) in 70 agitated alcoholic patients with good results.[1]

Recently acetophenazine (Tindal), the 2-acetyl derivative of perphenazine, became available for clinical use. The milligram-for-milligram potency of these piperazine-ring phenothiazines is many times higher than that of the earlier phenothiazine analogues and, more important, their use is not associated with jaundice, agranulocytosis, hypotension, or endocrinologic effects.[2] Extrapyramidal reactions, however, are fairly common with therapeutic doses of the ring-substituted phenothiazines; the single exception is acetophenazine, which does not produce extrapyramidal reactions except in doses far higher than those required for tranquilization and sedation.[2] Although 40 to 80 mg. daily is the recommended therapeutic dose, as much as 600 mg. daily has been administered to hospitalized psychotic patients with only 1 extrapyramidal reaction.[3] With the use of acetophenazine the sedative effect is proportionately greater than with the use of other piperazine-ring phenothiazines,[3, 4] and therefore this agent seems especially appropriate for use among agitated alcoholics.

COMPOSITION OF SERIES

This series consisted of 22 females and 23 males with acute and chronic alcoholism. Six patients were hospitalized; the others were treated initially in their homes and later in the office. When first seen, the patients were assaultive or tremulous and hysterical. In some the behavior indicated agitated depression. The immediate problem was to control them so that they would not harm themselves or others and so that definitive treatment could be carried out.

Two patients also had acute barbiturate withdrawal symptoms and 1 patient, with a history of arrested tuberculosis, was in withdrawal from addiction to terpin hydrate elixir. He had consumed 4 to 8 ounces (2 to 4 Gm. of terpin hydrate) daily for many months.

Most of these patients had varying degrees of avitaminosis, malnutrition, and dehydration. At the time of initial examination 3 patients had multiple severe contusions as a result of their assaultive behavior.

Laboratory tests and other diagnostic procedures were carried out as soon as possible. Elevated blood pressure was present in 22 patients, in 7 severe enough (170/100 mm. Hg or higher) to warrant the diagnosis of essential hypertension. Seven patients had Laennec's cirrhosis; in 3 of these, bromsulphalein excretion was decreased. Five patients were hypothyroid, 3 were anemic, and 1 was diabetic. Two females had the menopausal syndrome, and 1 patient reported severe chronic cephalalgia. One patient had slight hyperuricemia (uric acid 5.25 mg. per 100 c.c.), and another had hypercholesterolemia (total cholesterol 276 mg. per 100 c.c.).

MATERIALS AND METHODS

Intramuscular administration of 20 mg. acetophenazine* was employed for 1 day only to 15 patients and for 2 or 3 days to 5 patients; 1 violently agitated patient received a total of 80 mg. intramuscularly during the first day and 60, 40, and 20 mg. daily for an additional 5 days. Before parenteral acetophenazine became available I administered 20 mg. of perphenazine intramuscularly daily for 1 day to 6 patients, for 3 days to 1 patient, and for 8 days (starting with 80 mg. daily) to 1 patient. The other 15 patients did not require an intramuscular phenothiazine.

Oral therapy was begun with 80 mg. acetophenazine daily in divided doses (34 patients), or 60 or 40 mg. daily (11 patients). If therapy was continued beyond 2 weeks, the starting dose was halved after the second week. The mean duration of therapy was 11 days. The duration was 1 week or less for 25 patients and 1 to 2 weeks for 13 patients. Seven patients received long-term treatment ranging between 3 and 12 weeks.

To help correct the nutritional deficiencies of chronic alcoholism, outpatients received vitamin B complex and ascorbic acid intravenously at each office or home visit. Hospitalized patients received infusions of glucose and normal saline solution.

RESULTS

The injections of acetophenazine rapidly calmed agitated patients. They became quiet without being excessively sedated and were responsive to questions and instructions. There were no untoward effects, even after doses as high as 80 mg. daily. Intramuscular perphenazine produced generally similar results, but the mildly sedative effect of acetophenazine made it the more desirable agent.

Oral administration of acetophenazine also produced uniformly satisfactory results. The patients were manageable and alert. Long-term administration at reduced levels kept the patients under good emotional control so that definitive medical and psychiatric management could be attempted. This treatment also helped the 3 narcotic addicts endure withdrawal. The patient with severe chronic cephalalgia reported that the frequency and severity of headaches decreased greatly.

The longest duration of treatment was 87 days. A good tranquilizing effect was evident throughout, and there were no side-effects or complications of therapy.

Treatment did not lower blood pressure in normotensive patients. In the 22 patients whose blood pressure before treatment was 150/90 mm. Hg or higher, the blood pressure was reduced, but never below normal, in 20 patients; the other 2 patients were seen only once. The mean pretreatment value for the 20 patients was 165/95 mm. Hg, and the mean post-treatment value was 130/80 mm. Hg.

The pulse rate in 18 patients was normal before treatment and remained so. Mild or moderate tachycardia was noted in 27 patients before, but not during or after, treatment with acetophenazine. Bradycardia did not occur.

The nutritional status of the patients improved, and most had a desirable weight gain of 3 to 12 pounds.

ILLUSTRATIVE CASE

A middle-aged woman was seen in the hospital during acute withdrawal from alcohol and barbiturates. Periods of great tension and tremulousness alternated rapidly with depression and stupor. In addition to chronic alcoholism, the patient had a 10-year history of addiction to barbiturates and belladonna alkaloids. For 1 month before the present crisis she had taken approximately 3 grains of secobarbital (Seconal) daily. She also had the menopausal syndrome, avitaminosis, hypothyroidism, and a history of cyclic reactive and situational depression.

Acetophenazine, 20 mg., was given intramuscularly on the first day, and on the second day she received 80 mg. in 4 divided doses. Infusions of normal saline solution and glucose were given. For 4 additional days she received

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* Acetophenazine (Tindal) was provided for this study through the courtesy of W. Wesley Herndon, M.D., Medical Research Division, Schering Corporation, Bloomfield, New Jersey.

20 mg. of acetophenazine daily intramuscularly, and then oral acetophenazine, 80 mg. daily in 4 divided doses, was begun. The duration of treatment was 3 weeks, including 1 week in the hospital.

On the third day of hospitalization the patient had a grand mal seizure, apparently due to barbiturate withdrawal. She had had a similar seizure approximately 7 months previously, and an electroencephalogram immediately afterward showed an abnormal low-voltage pattern suggesting a hypermetabolic cerebral state.

Laboratory studies indicated normal values for the hematocrit, hemoglobin, and total and differential leukocyte counts. The fasting blood sugar, serum chloride, and serum calcium values were within normal limits, as were the urinary specific gravity and pH. Tests for urinary glucose and albumin were negative. The total serum cholesterol was in the upper range of normal (250 mg. per 100 c.c.). Roentgenograms of the skull showed no abnormality, and the electroencephalographic pattern was within normal limits.

During 2 weeks of outpatient management the patient received oral acetophenazine, 20 mg. 4 times daily. The tranquilizing effect was excellent, and there were no side-effects. The pulse rate decreased from 92 to 80 and the blood pressure from 142/90 to 122/80 mm. Hg.

COMMENT

Several special considerations govern the selection of a tranquilizing or sedating drug for chronic alcoholics. Since the alcohol addict is predisposed to addiction to drugs, barbiturate and other narcotic agents should be avoided if possible, especially if repeated administration probably will be required. Hepatic insufficiency is a common sequela of chronic alcoholism, and, therefore, drugs which can produce jaundice are especially to be avoided; barbiturates are inadvisable also, because of a possible hepatotoxic effect in sensitive patients. The drug should be rapid-acting so that it can be used in emergency situations, and it should be tolerated well when long-term administration is necessary. The degree of sedation should correlate well with the dosage level so that the effect on the patient is, to the greatest extent possible, within the control of the physician. And, perhaps most important, there should be no side-effects to further complicate an already complicated medical and psychiatric situation.

Acetophenazine appears to meet these requirements to a remarkable extent. It is an excellent agent for non-barbiturate tranquilization and sedation during acute alcoholic crises. It is nontoxic even when used for relatively long periods of time. Although the blood pressure of hypertensive patients is lowered to more nearly normal levels, acetophenazine does not produce hypotension in normotensive patients. The drug does not appear to cause depression or central nervous system abnormalities or any of the side-effects occasionally encountered with other phenothiazine derivatives.

SUMMARY

Acetophenazine (Tindal), a new phenothiazine, was used to treat 6 hospitalized and 39 home or office patients during the agitated phase of severe alcoholic intoxication. The usual oral dosage was 80, 60, or 40 mg. daily. Most patients were treated initially with acetophenazine or perphenazine intramuscularly, 80 or 40 mg. daily. The period of treatment was brief (2 weeks or less) for 38 patients; the other 7 were treated with gradually reduced doses for 3 to 12 weeks. Patients were adequately tranquilized and mildly sedated, becoming amenable to definitive medical and psychiatric management. There were no untoward reactions.

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The Fanconi Syndrome with Cystinosis*

Report of Two Cases

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THE FANCONI SYNDROME is a renal tubular disorder characterized by deficient reabsorption of normally filtered solutes. This leads to glucosuria, amino-aciduria and organic aciduria, as well as an increased urinary excretion of uric acid, ammonia, phosphate and protein. It is further characterized by rickets, resistant to ordinary doses of vitamin D, variable systemic acidosis, hypokalemia, hypouricemia, hypophosphatemia, and defective concentration and acidification of the urine.[1]

The diagnosis of multiple tubular reabsorptive defects (Fanconi syndrome) confronts the clinician with the further problem of discovering the etiology, i.e., the underlying disease. In the majority of childhood Fanconi syndromes, the underlying defect is a disorder in cystine metabolism leading to a widespread deposition of cystine crystals, including deposits in the renal tubular epithelium, the corneas, and the bone marrow. This crystal deposit provides a handy means of recognizing cystinosis by slit-lamp examination of the cornea[2, 3] and microscopic inspection of the bone marrow.[4] Photographs of the corneal appearance have been published by Cogan.[3]

We are reporting 2 examples of the Fanconi syndrome with cystinosis. These diagnoses were made by the use of readily available procedures and emphasize the importance of a high index of suspicion in children with rickets, glucosuria, or both.

REPORT OF CASES

Case 1. P. T., an 8½-year-old white girl, was admitted to Children's Hospital of D. C. for the fourth time on October 7, 1960. She was born after a full-term, uncomplicated pregnancy on March 31, 1952. The birth weight was 7 lb., 12 oz. She did well until 6 months of age, when she was admitted for the first time because of listlessness and anorexia. A diagnosis of microcytic nutritional anemia was made, and 350 c.c. of blood was transfused. At that time 2 urinalyses were alkaline, with 40 mg. per cent protein, 4-plus reducing substance, and a specific gravity of 1.010. After discharge from the hospital, progressively more severe polydipsia, craving for salt, polyuria and vomiting were noted. In addition, because of increasing bone deformities, she was given vitamin D, 1,500 units per day, without response. X-ray films showed the typical changes of rickets, and the child was admitted to Children's Hospital for the second time. Complete laboratory reports of urine and blood examinations are

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* This study was supported by the National Heart Institute Grant HTS-5353.

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shown in table 1. Persistently alkaline urines of low specific gravity and a tendency to systemic acidosis, hypophosphatemia, and hypokalemia strongly suggested the Fanconi syndrome. Treatment was begun with vitamin D, 150,000 units daily, with supplemental potassium, calcium, and sodium citrate. Three weeks later X-ray films of the long bones demonstrated beginning healing of the rickets. She was discharged on potassium and sodium citrate, and vitamin D, 25,000 units per day.

TABLE 1

Laboratory Data in Case 1 of Cystinosis with the Fanconi Syndrome

Urine	1953	1954	Sept. 1960	Oct. 1960
Output	—	—	—	580 → 1950 c.c./day
pH	Alkaline	Alkaline	7.5	5 → 7.5
Sugar	4+	3+	—	trace → 2+
Sp. gr.	1.010	—	1.004	1.001 → 1.008
Protein	40 mg. %	100 → 120 mg.%	150 mg.%	0.7 → 5.4 G/d
Acetone	2+	—	—	Negative
Sulkowitch's test	—	1+ → 2+	—	2+
Blood				
Hb Gm.%	11	7.8 → 10	6.4	6.8 → 8.1
Hematocrit	—	30 → 44	20	19 → 23
BUN	—	37 → 15	76	58 → 152
Sugar	—	—	92.6	144
Na mEq./l	—	131 → 134	142	119 → 142
Cl mEq./l	—	96 → 132	94.4	67 → 106
K mEq./l	—	1.7 → 4.9	5.3	3.2 → 4.8
Ca mg.%	—	8 → 15	7.8	9.6 → 7.2
P mg.%	—	1.6 → 6.2	7.6	8.3 → 7.8
CO_2 mEq./l	—	12 → 30	—	10 → 20
Alk. phos.	—	31 → 6.4 (Bodansky)	—	—
Total protein	—	6.6	—	—
Uric acid mg.%	—	—	—	12.5 mg.
Cholesterol	—	—	—	380 → 280
Ceph. floc.	—	—	—	Negative
Thymol turb.	—	—	—	15 units

In 1955 she had an episode of urinary-tract infection. In 1958 X-ray films showed complete healing of the rickets. The height and weight were now high-normal for her age. In September, 1960 she was readmitted to Children's Hospital for blood transfusion and further laboratory study. Table 1 shows the alkaline urine with low specific gravity, proteinuria, azotemia and hyperphosphatemia. The blood pressure was 190/120. A transfusion of 300 c.c. of blood was given, and the patient was discharged. She was readmitted after 2 weeks at which time she was pale and alert and had a blood pressure of 160/110. Cystine crystals were demonstrated in the corneas by slit-lamp examination. Laboratory data revealed urines with low specific gravities and variable pH, glucosuria, proteinuria, azotemia, hyperphosphatemia, hyperuricemia, and moderately low to

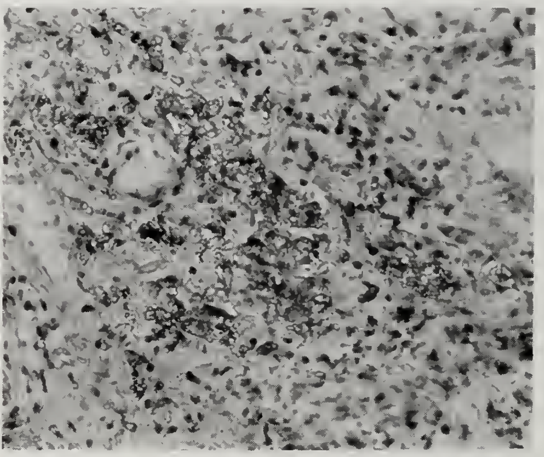

FIG. 1. Case 1. Kidney parenchyma studded with masses of interstitial and intraluminal cystine crystals.

normal serum carbon dioxide combining power (table 1). She was discharged for a brief period, then readmitted with severe uremia and died in November, 1960. At autopsy her kidneys, liver and brain revealed diffuse deposition of cystine crystals (figure 1). Additional histologic findings included fibrosis of the renal parenchyma. Sections of brain, spleen and kidney were chemically tested for cystine by the method of Sullivan[5] and were positive, as shown in figure 2.

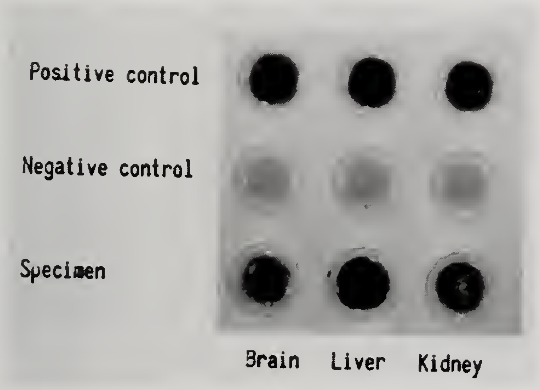

FIG. 2. Case 1. Positive (reddish purple) reaction to presence of cystine in brain, liver and kidney.

Case 2. M. I., a 5½-year-old white girl with a past history of rickets, was admitted to Children's Hospital of D. C. on August 30, 1960 for a diagnostic work-up. At this time she was walking with a wide-based gait and showed flat feet and knock-knees. In addition, she was known to have proteinuria. She was born on January 6, 1955 after a full-term and uncomplicated pregnancy. The birth weight was 7 lb., 2 oz. She walked at 12 months, at which time flat feet and knock-knees were noticeable. At 2½ years the diagnosis of rickets was made, and vitamin D therapy was begun with 15,000 units per day for 6 weeks without clinical response. The blood pressure was 115/70. The patient was in the seventh percentile for weight and less than third percentile for height. Heart, lungs and bony thorax were normal. X-ray films of the lower extremities showed a bone age of 2 years. There were metaphyseal irregularities indicating healing rickets and marked bowing of the tibiae and fibulae. The laboratory data, shown in table 2, revealed an alkaline urine with low specific gravity, proteinuria, hypokalemia and hypophosphatemia. The diagnosis of a renal tubular dysfunction was suspected, and the patient was discharged on vitamin D, 1,000 units per day.

TABLE 2

Laboratory Data in Case 2 of Cystinosis with the Fanconi Syndrome

Urine	8/30/60	10/28/60
Output	—	975 c.c./day
pH	7 → 7.5	7 → 7.5
Sugar	—	1+ → 3+
Sp. gr.	1.002 → 1.010	1.009
Protein	100 → 300 mg.%	4.5 G/day
Acetone	—	Negative
Sulkowitch's test	—	2+
Blood		
Hb. Gm.%	12.3	13.4
Hematocrit	39	35
BUN	28 → 20	26 → 30
Sugar	—	121
Na mEq./l	138	144
Cl mEq./l	—	111 → 100
K mEq./l	2.6	4.2 → 3.8
CO_2 mEq./l	21	16 → 20
Ca mg.%	9.4	10.9
P mg.%	3.4	3.5 → 4
Alk. phos.	16 (Bodansky)	10.8
Total protein	7.4	8.3
Uric acid	—	6.1
Cholesterol	—	320
Ceph. floc.	—	3.8 units
Thymol turb.	—	Negative

She was readmitted 2 months later. The physical examination was essentially unchanged. Bone-marrow aspiration showed the characteristic rectangular cystine crystals (figure 3), and cystine crystals were demonstrated in the corneas by slit-lamp examination (figure 4).

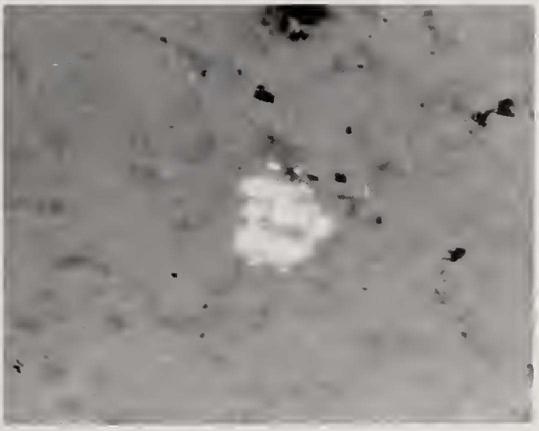

FIG. 3. Case 1. Cystine crystals in bone-marrow smear.

The clinical symptoms and laboratory data established the diagnosis of Fanconi syndrome with cystinosis. The patient was discharged and was to receive

50,000 units of vitamin D and Shohl's solution (citric acid, sodium and potassium citrate, 255 mEq. of sodium per liter and 243 mEq. of potassium per liter).

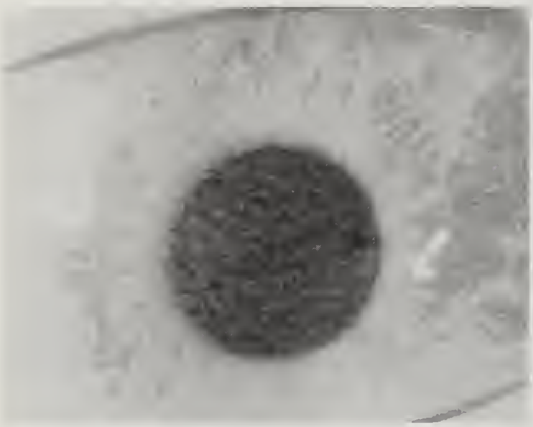

Fig. 4. Case 2. Slit-lamp appearance of cornea. Note diffuse deposition of cystine crystals.

Special studies. Amino-aciduria is a constant feature of the Fanconi syndrome and its presence was looked for in our patients. The normal excretion in children is 2.5 to 4.5 mg. of alpha amino acid nitrogen per Kg. of body weight per day.[6] Quantitative urinary amino acid determinations were performed by the method of Houck,[7] and the elevated values are shown in table 3.

TABLE 3

Urinary Excretion of Alpha-amino Nitrogen in Two Cases of Cystinosis with the Fanconi Syndrome, Expressed in mg./Kg. of Body Weight/Day

	10/26/60	10/28/60	10/29/60	10/30/60
Case 1	—	15.4	4.8	6.8
Case 2	22.4	10.7	—	—

Further special studies demonstrated that the glomerular filtration as measured by endogenous creatinine clearance in case 2 was 56 c.c. per minute per 1.73 square meters, which is about 50 per cent of normal. The fraction of the filtered load of phosphorus which was excreted in the urine in this case was 16 times normal.

Discussion

These 2 cases represent classical examples of the Fanconi syndrome with cystinosis. The major features were rickets which was resistant to ordinary doses of vitamin D, intermittent glucosuria, amino-aciduria, hyperphosphaturia, hypokalemia, inconstantly alkaline urine, low specific gravity, and gradually developing azotemia. Serum phosphorus in case 1 was low in the early stage of the disease and increased later with increasing azotemia. Serum phosphorus in case 2 was low, and its excretion in the urine was greatly increased. The chronic urinary loss of phosphorus in this disorder is the cause of rickets in children and osteomalacia in adults.[8] It is noteworthy that the rickets in the Fanconi syndrome is exactly like that caused by vitamin D deficiency. It should not be confused with the bone disorder seen in renal insufficiency (renal rickets), which is partly due to a secondary hyperparathyroidism.[9]

Amino-aciduria is a constant feature of the Fanconi syndrome, whereas defective acidification of urine and systemic acidosis are variable. As the disease progresses the glomerular filtration rate decreases, with retention of phosphorus, urea, uric acid, and many other serum constituents. The patients eventually die in uremia.

The diffuse impairment in tubular reabsorption which gives rise to the Fanconi syndrome may be due to either congenital or acquired causes. Pepin[10] believes that the Fanconi syndrome is a heredofamilial condition due to a congenital defect in the renal tubular epithelium. Clay et al[11] propose a congenital anomaly of the proximal tubule and have found such an anomaly in postmortem examination of 2 patients with the Fanconi syndrome. This consists of the so-called "swan-neck," which is a narrowing of the first portion of the proximal tubule as well as shortening of the entire proximal tubule. During the past few years many people have shown that the Fanconi syndrome may be associated with the deposition of various substances in the renal tubular epithelium, such as cystine, copper,[12, 13] galactose,[14] heavy metals (e.g., lead, mercury and uranium),[15, 16] and myeloma proteins.[17] It is, therefore, generally agreed that a variety of agents may interfere with tubular reabsorption and produce the Fanconi syndrome. The deposition of these substances in proximal tubular epithelium presumably has an inhibitory effect on those enzymatic activities which are responsible for the tubular reabsorption of amino acids, glucose, phosphorus and other solutes. Harrison and Harrison[18] were able to produce the urinary changes of the Fanconi syndrome in rats by injections of maleic acid. Maleic acid is an unsaturated dibasic acid which combines with the sulfhydryl group,[19] and consequently it may inhibit any enzyme activity which requires a free sulfhydryl group. This action has also been demonstrated by oxidizing agents such as cystine, lead and copper.[20] It is, therefore, suggested that these agents act by inhibiting sulfhydryl dependent enzymes in the proximal convoluted tubules.[21] A certain number of both adult and childhood cases of the Fanconi syndrome have no discernible etiology and must be classed as idiopathic or congenital.

In children the Fanconi syndrome appears to be more frequently due to cystinosis than to any other cause.[17] The etiology of cystinosis is not completely clear. Normally, cystine is reduced to cysteine in the presence of cystine reductase. It is thought that an absence or defect in the activity of this enzyme blocks the metabolic pathway of cystine, resulting in its increase in the blood and its deposition in various tissues of the body.[21]

Cystinosis is quite different from cystinuria and should not be confused with it. In cystinuria large amounts of cystine are excreted in the urine together with arginine, ornithine, and lysine. There is no defect in the metabolic pathway of cystine. The only clinical manifestation is the formation of cystine stones because of the poor solubility of cystine in acid urine.

The prognosis of the Fanconi syndrome with cystinosis is invariably poor. The patients suffer gradually progressive renal damage and eventually die of renal insufficiency, usually before adolescence.[1, 3] The development of azotemia is accompanied by progressive elevation of serum phosphorus and uric acid concentrations, so that the characteristic depression of these values may be obliterated late in the disease.

As to the treatment of the Fanconi syndrome, massive doses of vitamin D (i.e., more than 50,000 units per day) will improve the rickets and decrease the urinary excretion of amino acids, glucose, phosphorus, and ammonia. The mode of action of vitamin D in this disorder is not clearly known. Worthen and Good[21] confirmed the fall in the excretion of amino acids, glucose and ammonia and also the correction of acidosis by such therapy. Salassa et al[22] reported that by the administration of 400,000 units of vitamin D per day there is a marked drop in phosphorus clearance and improvement of the hypophosphatemia and hypocalcemia. In addition, administration of potassium, sodium and alkali are necessary to compensate the loss of these substances in the urine and to combat systemic acidosis. It has been claimed[23] that administration of alphatocopherol will decrease the deposition of cystine in tissues, but confirmatory studies are not yet available.

SUMMARY

Two cases of the Fanconi syndrome have been described. The major features included inconstant glucosuria, rickets, alkaline urines of low specific gravity, hypophosphatemia, hypokalemia, increased urinary amino acids, and nitrogen retention. In addition, the identification of cystinosis as the underlying disease was easily accomplished by slit-lamp examination of the corneas in both patients and also by bone-marrow aspiration in one. Renal insufficiency with nitrogen retention is present in the living 5½-year-old patient, and death in uremia occurred in the other patient at the age of 8½ years. A review of the pertinent literature demonstrates several possible etiologies for the Fanconi syndrome. Cystinosis is a common underlying disorder in the Fanconi syndrome of childhood.

(Continued on page 758)

Effect of Massive Irradiation on Pelvic Lymph Nodes in Sarcoidosis*

Report of a Case

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THE LACK of general knowledge of the radiosensitivity of Boeck's sarcoidosis and the unusual opportunity for studying the radiosensitivity of sarcoidosis afforded by a recent case of lymphadenectomy associated with the Wertheim operation are discussed. Morphologic changes in the lymph nodes involved by sarcoid granuloma which have received cancerocidal doses of X-rays are described.

REPORT OF CASE

The patient, a 43-year-old white woman, gravida II, Para I, was first admitted on September 21, 1959 to the Harkness Pavilion of the Columbia-Presbyterian Medical Center for a diagnostic workup of an asymptomatic lung lesion discovered on a routine chest roentgenogram. Her history on admission was unrevealing with the exception of progressive enlargement of lung parenchymal densities and hilar lymph nodes over a 6-month period. She had no constitutional symptoms of lung disease. Intradermal testing for histoplasmosis, coccidioidomycosis, and second strength PPD had been negative prior to admission. Further history on admission revealed postcoital spotting over a year's duration for which the patient had sought no medical aid. Her menses were regular. The hospital workup revealed a positive Kveim test and a normal hemogram and blood protein studies, but the pelvic examination revealed a friable lesion of the cervix, which on subsequent biopsy proved to be an epidermoid carcinoma of the cervix, stage I. Several X-ray examinations, including intravenous pyelogram and the hands, were normal. The chest films revealed "pulmonary infiltration and hilar adenopathy suggestive of Boeck's sarcoid" (figure 1). At no time had the patient received any treatment for her sarcoidosis, which was considered clinically to be progressive.

In view of the pulmonary sarcoidosis, a radiotherapeutic approach to the carcinoma of the cervix was decided upon, and the patient received intracavitary radium, 60 mg. × 100 hours (6,000 mg.-hours) filter 1.0 mm. Pt., with 5,370 gamma roentgens to point A and 800 gamma roentgens to point B.

This was followed by 25 external radiotherapy treatments, duration 35 elapsed days, on the Cobalt 60 unit for an estimated midline dose to the pelvis of 4,800 r; 15 x 18 cm. dimensions of opposing portals were used at skin source distance of 50 cm. It is estimated that the patient received a total dose over the entire treatment of 10,170 r delivered to point A. Point B, theoretically the lateral pelvic wall, received 5,600 r total. A minimum of 4,800 r was delivered to both side walls and to the presacral area. External iliac, hypogastric and obturator lymph nodes are considered to have received a minimum of 5,000 r and a maximum of 6,000 r. The parametrial lymph nodes are estimated to have obtained radiation in the range of 7,000 to 10,000 r. All the doses received by pelvic lymph nodes are considered to be cancerocidal.

The patient tolerated this mode of radiotherapy well and was asymptomatic up to 2 months prior to her second admission, October 30, 1960, when she again noted vaginal spotting, 10 months after completion of her radiotherapy. A dilation and curettage with cervical biopsy was performed, and recurrent epidermoid carcinoma of the cervix was found. This was followed by a radical hysterectomy and pelvic lymphadenectomy. Large, firm nodes were found throughout the pelvis, with the exception of the periaortic lymph nodes, which were grossly normal. The patient's postoperative course was not remarkable. The pulmonary sarcoidosis, however, was clinically and roentgenologically not controlled.

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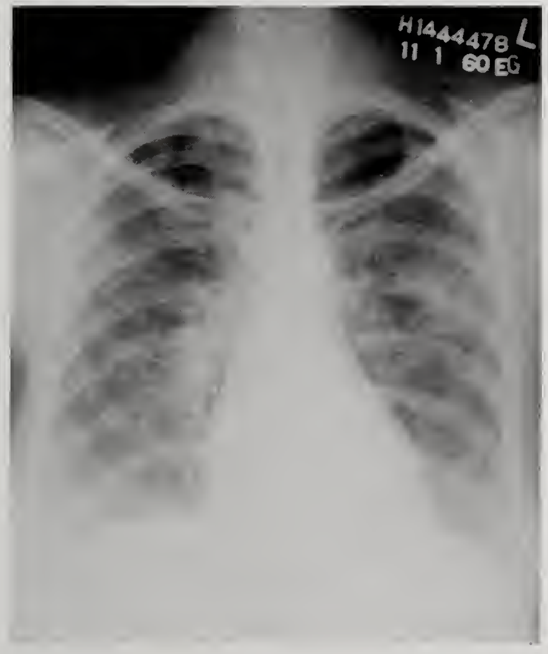

FIG. 1. Diffuse bilateral hilar enlargement and pulmonary infiltration.

The cervix and uterus, with attached ovaries, weighed 100 Gm. A 3.0 cm. vaginal cuff was attached around the entire circumference of the cervix. On either side of the uterus parametrial connective tissue, 2.0 cm. in length, was seen. On opening the specimen the external cervical os and endocervical canal were stenosed. The endometrial cavity was seen to be hemorrhagic. Both tubes were grossly normal. The right and left ovaries were atrophic, each measuring 1.0 x 1.0 x 1.0 cm.

Nineteen pelvic lymph nodes, from different pelvic areas, were examined. The largest node was 3.0 x 2.0 cm. in diameter; the others were 2.0 x 1.0, 1.0 x 1.0, and 0.5 x 0.3 cm. They were uniformly firm. On cut section, replacement of the normal architectural pattern by whitish, firm tissue was seen.

On microscopic examination the cervix and endocervix showed great radiation effect, consisting of obliterating arteriolitis and extensive areas of hyalinization, interspersed by hemorrhagic necrosis. The preserved cervical stroma showed extensive infiltration with eosinophils. Focal areas of calcification were seen. In addition, numerous hemosiderin-laden macrophages were scattered throughout. No residual neoplastic cells were seen.

Sections of the uterus showed extensive endometrial atrophy, marked interstitial hyalinization of the myometrium and occasional obliterative arteriolitis. Both tubes and both ovaries were atrophic.

Serial sections of the parametrium showed no evidence of neoplasia.

Examination of 19 pelvic lymph nodes revealed uniform replacement of normal architecture by noncaseating granulomata. The granulomata were formed of prominent epithelioid cells with scattered multinucleated giant cells. The majority of the granulomata, however, showed deposition and accumulation of homogeneous, eosinophilic material. This material was seen deposited, also, in the preserved architecture of the lymph nodes.

1. The Ziehl-Neelsen stain for tubercle bacilli was negative on all sections of the lymph nodes.

2. Verhoeff's elastic stain, Alcian blue stain, Bennhold's congo red stain for amyloid, and toluidine blue O for metachromatic staining of acidic carbohydrates were noncontributory.

3. Reticulum stain showed the even distribution of reticulum fibers to be disrupted by the presence of brown staining material, which was seen within Boeck's granulomata as well as outside in the lymphatic stroma (figure 2).

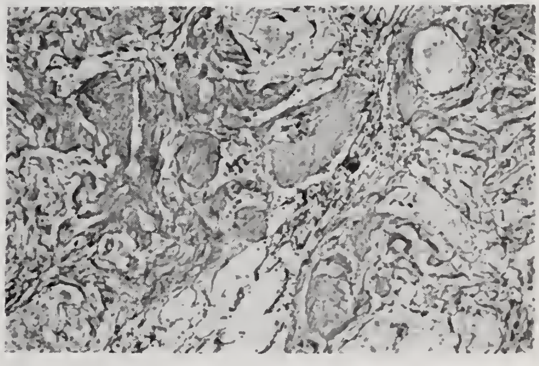

FIG. 2. Right iliac node, showing disruption of the reticular fibers and deposition of collagen material (reticulum stain).

4. Masson stain showed massive deposition of eosinophilic material representing, most probably, deposition of collagenous fibers. The collagenous material was seen enfolding the granulomata and was dispersed in the surrounding stroma. Some of the sarcoid giant cells

were phagocytizing the broken down collagenous material (figure 3).

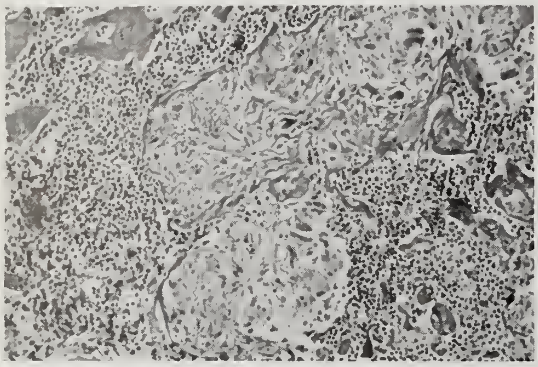

FIG. 3. Massive deposition of basophilic material representing collagenous fibers. Note deposition in noninvolved area (Masson stain).

5. Periodic acid Schiff reaction (PAS) showed the same distribution of PAS-positive material as the Masson stain for collagen. This indicates that the formed collagen in the granulomata and stroma of the lymph nodes has the characteristics of neutral polysaccharides (figure 4).

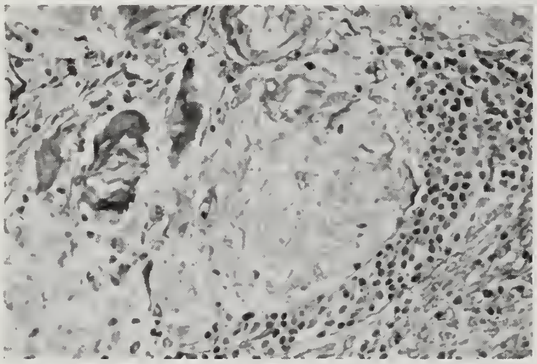

FIG. 4. Distribution of PAS-positive material in sarcoid granulomata following irradiation (periodic acid Schiff reaction).

6. PAS after diastase digestion showed no changes in distribution of mucopolysaccharides.

7. Van Gieson's stain showed deposition of collagen fibers between the epithelioid cells of the sarcoid granulomata and around them. In places there were areas of complete replacement of the granulomata by collagen material. Arterioles and arteries in the pericapsular fatty tissue of the lymph nodes showed great thickening of their walls and deposition of collagen (figure 5).

8. Mallory's phosphotungstic acid hematoxylin confirmed the deposition of collagen within and around the sarcoid granulomata. There was considerable thickening of the capsules of the lymph nodes. Metastases were not encountered in the lymph nodes.

The diagnoses were: (1) cervix, endocervix, parametria, pelvic lymph nodes, no evidence of residual or metastatic carcinoma; (2) sarcoidosis with radiation effect, pelvic lymph nodes; (3) radiation effect, cervix, uterus, tubes, ovaries.

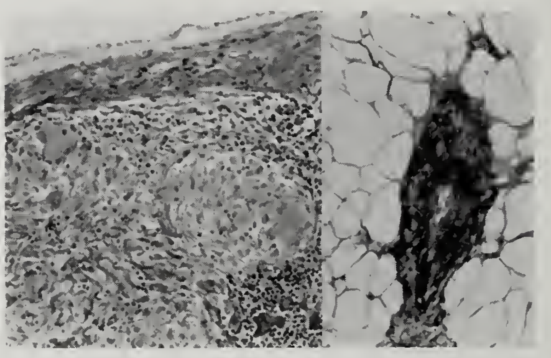

FIG. 5. Medium-power view and high-power view of a sarcoid lymph node respectively, showing marked collagenization of the capsule and arteriolar obliteration and fibrosis within the pericapsular fatty tissue (H & E stain).

DISCUSSION

In reviewing the literature we were not able to find any references to morphologic and histopathologic changes in sarcoid lymph nodes treated by X-rays. There are reports of X-ray treatment of Boeck's sarcoid, but these reports are inconclusive regarding radiotherapy as a modality of treatment. Clinical changes in the size of lymph nodes have been interpreted as spontaneous regression of the disease in some reports, and still other reports show no effect clinically on the nodes of sarcoidosis.[1, 2, 3] Most radiologists are in harmony, however, in not recommending cancerocidal doses of radiotherapy as a modality of treatment,[2] with the possible exception in cutaneous sarcoid,[3] and then only in suberythemal dose.

Sarcoid granulomata have been known to heal without irradiation by hyalinization and fibrosis.[1, 4 5, 6] Peculiar hyaline bands are observed in the lymph nodes, spleen, and lungs in the late stage of sarcoidosis.[5, 6] While they are not specific, they remind one of the healing stage of tuberculosis (Klemperer),[1] and as the disease has a natural tendency to undergo spontaneous remission, the evaluation of the therapy (not knowing at the present time the etiology and pathogenesis of this granuloma) is difficult.[3]

It is our intention to focus attention on the histopathologic changes in Boeck's sarcoid lymph nodes which have received cancerocidal doses of X-rays. In our case the pelvic lymph nodes found at the time of operation were grossly thought to represent metastatic carcinoma, but under pathologic examination they proved to be sarcoidosis. It is important to note that the patient at no time prior to surgery was thought to have generalized sarcoidosis. Her disease was thought to be limited to the lungs and hilar lymph nodes. She had not received any modality of treatment which would influence the course of her sarcoid prior to surgery. Clinically and on X-ray examination there were no evidences of spontaneous regression of the pulmonary sarcoidosis. Therefore, we feel safe in assuming that the morphologic changes in her pelvic lymph nodes are due to radiotherapy. It was impossible to obtain from this patient a lymph node from an area not exposed to radiotherapy. However, this does not rule out our concept.

The histopathologic changes seen in the irradiated sarcoid granuloma involving the pelvic lymph nodes are characterized by:

A. Massive deposition of homogenous collagenous material within and around the granuloma and in the noninvolved lymphoid tissue of the nodes.

B. The usual orderly pattern of reticulum fibers is distorted and disrupted by the intrafibrillar deposition of collagen material.

C. The collagenous material is formed predominantly of neutral mucopolysaccharides. There is apparent evidence that the granulomatous process is being arrested. The deposition of PAS-positive material represents a breakdown of the granuloma and this is associated with extrusion of the same material into the nonaffected lymphoid tissue.

D. The epithelioid cells of the granulomata are being replaced by collagenous material and some of the sarcoid giant cells are showing evidence of phagocytosis. These giant cells contain within their cytoplasm broken down PAS-positive material.

E. The thickening of the capsule of the lymph nodes and the obliteration and fibrosis of the arterioles located in the perilymphatic fatty tissue suggest to us definite evidence of radiation effect on these tissue components (figure 5).

F. Extensive histologic and histochemical study are conclusive that the material accumulated within the sarcoid lymph nodes is collagen.

Within the pericapsular tissue of the lymph nodes the vessels exhibited massive thickening of their walls and the deposition of collagen. This obliterative process was of remarkable uniformity and extended to all arterioles and occasional arteries. There was also deposition and increase of collagen fibers within connective tissue capsules of the lymph nodes. These findings were observed uniformly in all pelvic lymph nodes examined. There is no doubt that they represent radiation damage to the vessels and lymph node capsules.

The question arises as to the modus of replacement of sarcoid granuloma by collagen tissue. In our opinion, the radiation energy is the initiating agent in producing nuclear and cytoplasmic damage of the granuloma cells and this is followed by intracellular accumulation of PAS-positive material. This material is then liberated or extruded and deposited in between the epithelioid cells. To what extent the obliterative process of the arteries and arterioles contributes to the collagenization of the sarcoid granulomata by hypoxia remains a matter of speculation. Certainly it could be considered as having a cumulative effect.

By virtue of this intra- and intercellular collagenization the granulomatous process is arrested and the granulomatous foci are replaced by collagen bands. We do not advocate the term "hyaline bands" in view of the controversial nature of this entity. Our histologic and histochemical methods applied in investigation of the pelvic lymph nodes indicate collagen as the histologically distinguishable substance replacing the sarcoid granulomata.

All the above enumerated changes indicate that Boeck's sarcoid responds to radiation energy by breakdown and replacement of granulomata by collagenous tissue. The amount of irradiation received by these lymph nodes, as stated previously, is in the range of 5,000 to 10,000 r.

We are not in a position to say at which calculated amount of radiation the earliest morphologic changes would occur, nor are we suggesting the use of cancerocidal doses of irradiation for treatment of this granulomatous process. We are merely registering the radiobiologic effect of massive irradiation upon lymph-node sarcoidosis.

SUMMARY

The histological changes found in the pelvic lymph nodes involved by Boeck's sarcoidosis and previously exposed to massive irradiation in the course of X-ray therapy for epidermoid carcinoma of the cervix have been described.

Sarcoid lymph nodes following irradiation by doses of X-ray greater than 4,800 r by radium and Cobalt-60 sources have shown definite morphologic changes of an arrest and massive collagen deposition.

Histologic and histochemical investigation of the material deposited in the sarcoid lymph nodes after irradiation reveals it to be collagen.

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PRESIDENT'S PAGE

THE ROLE OF JANUS

To GUARD THE GATE for going in and for coming out and to look toward the past to see the future are symbolic of the relation of history to prophecy. As I move to my permanent place beside the 93 who have gone before, I know that study of what has already been is the best protection against error in what is to be. And so I yield to the not unnatural desire to look both ways at once.

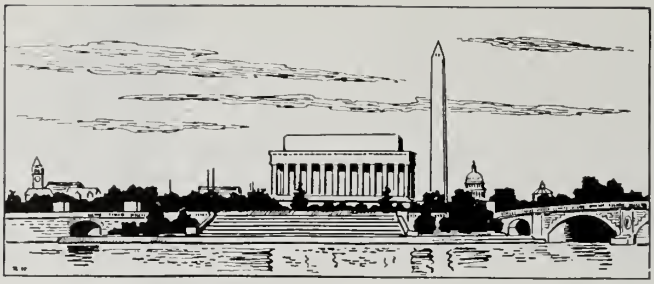
During 1961 we have made another great stride along the rushing way to more complex organization with expanding medical technology and more demanding urgency for economic change in our profession. A sophisticated public wants more of this better medical care and insists upon improved distribution. These disruptions continue to cloud the image of the good doctor while his art and humanitarian dedication seem almost cunningly hidden.

Our understanding that voluntary prepayment is the desirable as well as the only alternative to a wider governmental role in health care was approved by the House of Delegates of the AMA a full year ago, but the urgency to move more vigorously in national development under the resulting Joint Commission has not been realized by those charged to obey the House directive.

Looking to the future, it is obvious that the Medical Society's role must change. No longer can we offer primarily instruction in the science of medicine but must seek to help coördinate and bring together the varied efforts being made concurrently on so many fronts. We cannot rely upon the summation of individual faith and humanity to provide group guidance and form public image, but must seek an organized approach. We should depend more upon our local capacity in the Nation's Capital to clarify the social role of medicine in our modern society, for we know that this must become a role of influence and leadership.

These things and many more become the purview of our ninety-fifth President, Dr. Spencer Dryden. To him from lowering hand I pass the torch. Be his to hold it high.

Donald Stubbs



EDITORIALS

"We believe that the greatest need for men and women throughout the world is for true peace with God and the answer to this need is a living faith, just as the answer to their physical needs is modern preventive and curative medicine."

—Archibald G. Fletcher, M.D.

THE MEDICAL SELF-HELP TRAINING PROGRAM

All the ingredients of an historical event seemed to charge the air in the assembly room of an old barracks building in Brooklyn in mid-October. Representatives from 17 eastern states had been called together to look at a new type suitcase called the Medical Self-Help Training Kit.

The men and women assembled soon discovered that they represented each state's medical society, board of education, public health service, health mobilization and civil defense organizations. In addition to these teams there were representatives from the American Red Cross, Veterans Administration, Department of Health, Education, and Welfare, and private industries.

This was the first of three "workshops" to be held in our Nation to unveil the "suitcase" to state representatives. The "program" had been nursed through its infancy at the Federal level and had now "become of age"; the states were asked to take over the training of this youngster.

Five thousand of these "suitcases" or kits soon will be distributed to our 50 states. This initial allotment is to reach men trained in the ways of health education. These men will in turn pass the kits on to others, and by way of the "old chain letter" system it is expected that one member in every family in our Nation will have learned its contents. In this process old kits will be replaced by new ones.

This is an ambitious program—a youngster that is expected to grow to the size of 60 million people! Such a kit must contain something of great importance. It contains a film strip projector and screen, 12 lectures with illustrations in color, and illustrated guidebooks of each lecture.

The content of the lectures is what is so important; it is a course in the basic principles of self-help in a nuclear era. Not what to do in an emergency until the doctor comes, but what to do for yourself and others in mass disaster emergencies where the doctor will not be coming—at least not for two weeks or maybe more.

This is a new dimension to first aid and survival—one that we as physicians have not fully accepted or perhaps not even considered. Yet it is our responsibility if we are to retain

Opinions expressed in contributions to the Editorial Section are those of the writers and do not necessarily reflect the views of the Medical Society of the District of Columbia

the basic function of physicians. It is a new approach to preventive medicine in that we must further train members of our society to do what they can for themselves when we cannot reach them.

Any new dimension is frightening until it is better understood. Living in the beginning of a nuclear age imposes on us the same challenge our ancestors had when confronted by forest fires started by lightning. Objectivity and emotional control are needed before this task can begin. The physician can and will play a responsible role. His knowledge and experience as well as his reassurance and stimulation are necessary in matters of the health of our Nation.

This is the current challenge of physicians today; it is not a leisurely task. This is why the assembly in Brooklyn had an air of historical significance.

HOWARD C. PIERPONT, M.D.

"ACTION FOR MENTAL HEALTH"

It looks increasingly as though "Action for Mental Health,"[1] the final report of the Joint Commission on Mental Illness and Health, released in March this year, will have an impact on medicine's view of mental illness roughly comparable to that of the Flexner report on medical education.

As for psychiatrists and other professional workers in the field of mental health, however much they may haggle over some of its debatable recommendations, few will debate the basic rationale that "Action for Mental Health" espouses, to wit: That the Federal government must join with state and local governments in tripling expenditures over the next ten years to revolutionize the public care of nearly 1,000,000 persons with major mental illness who pass through state hospitals and community clinics each year.

A major question of moment is: Will organized medicine as a whole lend its support to this "first proposal in American history that attempts to encompass the total problem of mental patient services and to make minimum standards of adequate care financially possible?" Happily there is good evidence, after a century of tolerating "bad medicine" in public mental hospitals, that organized medicine will, indeed, lend its support and machinery to a fresh and comprehensive approach to the problem.

The best evidence is that during September 28–October 1 of this year the American Medical Association organized and conducted a conference in Chicago of over 175 leaders in psychiatry and related disciplines. The conferees were asked to assist the AMA in the formulation of a comprehensive mental health program which would lead to the active participation of all its members, as physicians and citizens, in the problems of mental illness and health. In taking this historic and far-reaching step AMA officials left no doubt that they meant business. In welcoming the delegates, AMA Trustee Dr. Gerald B. Dorman said: "We stand ready to back a massive and thorough program designed to combat mental illness and promote mental health. . . . The AMA is in this thing to stay."

The delegates were encouraged to take "Action for Mental Health" as a point of departure for their deliberations, since the AMA Board of Trustees had last June resolved that the "report be recognized as an historical contribution to the promotion of mental health and prevention and care of mental illness, and that it be considered as the basis for a program which the American Medical Association can endorse and support. . . ."

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[1] Action for Mental Health. Final Report of the Joint Commission on Mental Illness and Health. Price, $6.75. Pp. 338. New York: Basic Books, 1961.

Stimulated and excited by the opportunity and its promise, the conferees went to work for three days and produced scores of recommendations for AMA's consideration under the general headings of Medical Education, Communicating Mental Health Knowledge, Community Services, Hospital Programs, Personnel Problems, and Research.

These recommendations, now being reviewed by the AMA Council on Mental Health, will be submitted for discussion and comment to the chairmen of mental health committees of all state medical societies before presentation to the Board of Trustees and finally to the House of Delegates. This will be the first step in setting AMA machinery to work in channeling the new messages to the physicians of America.

Already in the planning stage, proceeding on the recommendations of the recent Chicago Conference, is a National Congress on Mental Health which will be organized by the Council on Mental Health and scheduled for the fall.

These recent developments in the field of psychiatry, if implemented as planned, will certainly constitute a great historical landmark in the history of mankind's responsibility to the emotionally ill.

Robert T. Morse, M.D.
Vice Chairman,
Committee on Mental Health

EMPLOYERS AND THE HEALTH OF THEIR EMPLOYEES

The 21st Annual Congress on Occupational Health, Denver, Colorado, October 3-4, 1961, reëmphasized in its scientific sessions the nonoccupational diseases plaguing the industrial worker. It also placed emphasis on the diagnosis of occupational disease by the general practitioner and defined a number of problem areas relating to the most effective utilization of the worker whether he be "whole" or handicapped. The meeting was held in coöperation with the Colorado State Medical Society, and the fine attendance at the meetings by its members attested to their interest in the health of the worker.

The District of Columbia is not a city of heavy industry, nor is it a major manufacturing center. Nevertheless, its citizens work primarily at jobs associated with goods and services, and the time has passed when the employer can intelligently ignore the health of his employees. The Committee on Occupational Health of our Society has concerned itself primarily with matters of compensation medicine, especially fees. It is high time the Committee gave direction to employers in the District of Columbia through our Society in matters relating to employee health. Its role should become active and cease being passive.

Industry and business need the wise guidance of well informed physicians in relation to all phases of employee health. By and large we have failed to provide leadership in this area in our City. I hope this will challenge the Committee and the City toward a more active role in this important area of preventive medicine.

R. Lomax Wells, M.D.

THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

IN & OUT OF FOCUS

By the Observer

"Health-USA" Awards

The first "Health - USA" Awards luncheon sponsored by the Metropolitan Washington Board of Trade and the Medical Society was held on July 1, 1958. Its purpose was to recognize outstanding contributions by physicians or laymen in the health field. The recipient of the initial Award was Dr. LeRoy E. Burney, Surgeon General of the Public Health Service and President of the Eleventh World Health Assembly. His choice was widely applauded.

Since that time those honored at the luncheons have been Senator Lister Hill (1959); Major General Howard McC. Snyder, MC, USA, Physician to the President of the United States (1960); Mr. Elmer H. Bobst, Chairman of the Board, Warner-Lambert Pharmaceutical Company (1960); Dr. Donald H. Stubbs, Chairman of the Board of Trustees of the National Blue Shield Plans (1960); Dr. James A. Shannon, Director, National Institutes of Health (1961); and Dr. William B. Walsh, Founder and President of the Project "HOPE" (1961).

From the standpoint of attendance, the luncheons have been highly successful, although on each occasion there was a deficit. In the matter of organization and method of selecting recipients of the Awards, representatives of the Medical Society felt the undertaking left much to be desired. In a memorandum to the Society's Executive Board they made it clear that in their opinion selections to date had been excellent. To assure permanence of the project they proposed that the organizational side of the luncheons be placed in the hands of an executive committee. Choice of the awardees, it was urged, be turned over to a prominent group of physicians, scientists and laymen. The memorandum concluded that "if the Society feels and wants to participate in such an undertaking" it was hoped the above recommendations would be approved.

At its meeting on October 25, 1961, the Executive Board concurred in the views and recommendations of the Society's representatives. Immediately thereafter Dr. Donald Stubbs, President of the Society, wrote Mr. John W. Thompson, President of the Metropolitan Washington Board of Trade, informing him of the Board's action. Mr. Thompson replied that at an informal meeting the group which had previously promoted the "Health-USA" Awards luncheons unanimously concurred in the suggested changes. Dr. Richard T. Sullivan, formerly Chairman of the Board of Trade's Public Health Committee, who had been closely identified with this project since its inception, Mr. Thompson stated, would be designated

Chairman of the Executive Committee for the "Health-USA" Awards. The Society was requested to submit the names of three of its members to be appointed to the Committee. The Board promptly designated Drs. Oscar B. Hunter, Jr., W. LeRoy Dunn, and Milton M. Greenberg.

The Board asked for more time to consider the appointments to the committee to select the recipients of the awards. At the time this was written this matter was still under consideration.

The Board is strongly of the opinion that if conducted along the lines agreed upon the "Health-USA" Awards will not only have local but national significance.

★

Paperwork Doctors have become increasingly vocal in their protest against mounting paperwork. One Washington physician told your Observer recently that he employs one office assistant who does little else than make out reports to insurance companies.

In fairness to larger companies writing health and accident and health insurance, every effort has been made by them to simplify and standardize their forms. This apparently has not been true in the field of life insurance, where forms frequently take up a great deal of the physician's time.

Dr. C. Lawrence Holt, an internist practicing in Portland, Maine, has some caustic comments to make on this subject in the November issue of *The Altantic Monthly* in an article entitled, "And the Sick Shall Wait."

Dr. Holt charges that "So much time must be devoted to paperwork that less [time] becomes available for the fulfillment of the physicians' *raison d'être*, treating the sick. There are only 24 hours in a day. If the life insurance companies are pressing for a greater portion of the physician's time for their purpose, fewer hours are available for the care of his patients."

He points to the inadequacy of the examinations made by the regular examiners, which he lays to the life insurance companies' "penurious" practice of "throwing the burden on the private practitioner."

As to the type of examinations now being made he writes:

"*Take it easy. . . . The doctor will see you when he finishes filling out forms.*"

> "The routine pre-insurance examination seems to me to be outmoded and unrealistic. An unreasonable amount of attention is given to the pulse rate of the patient, at rest, after 25 jumps, after two and four minutes' rest—and after five minutes' inhalation of 100 per cent pure oxygen for those individuals who fall flat on their faces at the count of 20, not having had adequate training for the prescribed exercise. The amount of attention focused on the blood pressure also seems unreasonable. It is recorded with the patient in a sitting position first. If variable in nature, it must be taken with the examinee reclining, sitting, standing, looking first toward the east, then the west, during inhalation, exhalation, and finally, holding his breath. If the systolic pressure is 'over 150 mm. Hg' or the diastolic figure is 'between 90 and 100 mm. Hg,' the examinee must wait 10, 20, or 30 minutes, if necessary, to determine if boredom will knock his pressure down to a level where it will be acceptable.
>
> "Few of the insurance forms require examination of the breasts of the female; no mention is made of the

> tremendously accurate and absolutely essential Papanicolaou cancer-cell smear test of the cervix of the uterus; the ever-threatening prostate gland of the male deserves much more attention than the 'resting and jumping' pulse rate, as does the valuable rectal examination to rule out (or confirm) a cancer of the rectum, in both sexes.
>
> "The value put on the examination of the urine, to the exclusion of all other laboratory tests, horrifies me. Not a word is mentioned about the red and white blood cells, the hemoglobin, or blood smear. In many instances, the serological test for syphilis is not even deemed necessary. The testing of the stool for hidden blood is completely ignored, although it has been proved to be a reliable index of the possibility of a latent cancer of the stomach and intestinal tract. An X-ray of the chest, fluoroscopic examination, and electrocardiographic tracing are not even mentioned in the routine insurance company examination.
>
> "If the policy is to be a relatively large one, the company's examining physician must attest in writing that the urine specimen was passed in his presence. This at times proves to be an embarrassing procedure for men, more so for women, as should be clear. I think this is an insult of barbaric quality for patient and physician. The insurance company has in mind, of course, the danger that an overzealous, coöperative secretary or technician in the employ of the physician may supply another specimen in order to guarantee a reasonably normal urinary product. It suggests that the companies feel that every individual who plans to burden himself with a large policy is a crook from the start—a rather poor way to start amiable business relationships."

One of the questions asked in the regular examination form is: "Have you had any illnesses or seen any doctor for any reason during the past five (or ten) years?" If the answer is yes, the name and address of the physician are requested. Routinely the company's medical department communicates with the family physician of the applicant, enclosing his permission to disclose any information about his treatment. The form sent the physician, Dr. Holt states, is "most complex." The time required to complete the form where there is only one call is only ten minutes. However, if there is a history of complicated illnesses, it may take an hour and a half or more. The doctor, he observes, doesn't do the paperwork "merely because the company requests it." He looks upon it as a "moral obligation" to his patient who seeks to obtain insurance.

Dr. Holt is especially critical of the frequent phone calls from the agents and medical departments of the companies if the physician has not forwarded his report a few days after the examination. Where $100,000 policies are involved, he writes, "six or seven vice presidents may call." If the doctor excuses himself by saying that he has patients that urgently need his services, he is reminded of his obligation to the applicant.

Dr. Holt concludes:

> "On the basis of experience in the past 15 to 20 years, especially in the past five, I believe that the problem will grow more acute as more and more people take advantage of life insurance. There is no sign that the medical departments of the insurance companies have any intention of improving or modernizing their own examinations of their potential customers. And why should they, when it appears that the patient's own doctor will continue to be the main source of adequate, dependable medical information?"

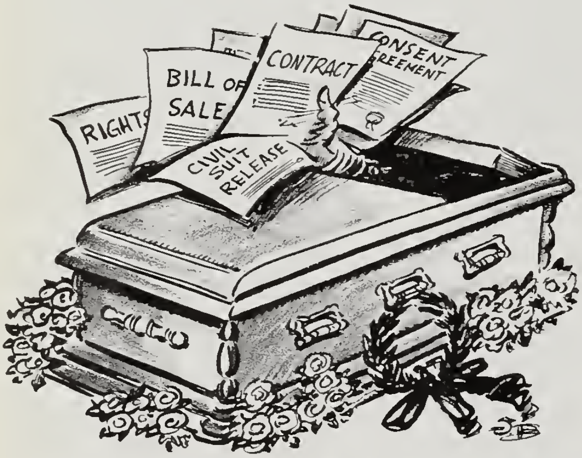
★

Bodies for Research

From time to time telephone calls are received at the Society's Executive Offices from individuals who, upon their demise, want to will their bodies to medical institutions. A few would like to sell their bodies and collect in advance. All of these calls have been referred to medical schools.

Undoubtedly interest in this matter has been stimulated by publicity which has been given to corneal transplants, several inquirers having indicated a desire to give their eyes to an eye bank. Until quite recently most state laws have thwarted this desire. However, a number of state legislatures have now been persuaded to enact special laws granting, with such exceptions as minors, the right of individuals to dispose of their eyes and other parts of their bodies to medical institutions by their Last Will and Testament, or other agreement executed prior to death.

Connecticut became the twenty-fifth state to permit body donations. The law in this state, according to *The Doctor & the Law, a Monthly Medico-Legal Newsletter*, "authorizes any person over the age of 21 and of sound mind to direct that any part of his body be delivered to a hospital or medical institution approved by the commissioner of health. The instrument directing such disposition shall be signed by the donor in the presence of two witnesses and before a notary. If no institution is specified by the donor, the commissioner of health may indicate the institution to receive the body or body parts. The law also provides that the receiving institution shall not be liable for damages in any civil suit for the removal of the part donated, so long as the gift has not been revoked."



The End No Longer Means the End!

The District of Columbia is not included in the jurisdictions where a law similar to the above is in effect. In the District the common law applies, the surviving wife or husband or next of kin being entitled to the possession of the dead body in the condition in which it was found at death. The right of possession does not "constitute legal title with the right to sell the body—only the right, and obligation, to give it proper burial." This makes it essential that consent be obtained before the performance of an autopsy, and that those with this right to possession sign the consent. In these circumstances, District citizens cannot be certain that their wishes with respect to the disposition of their bodies after death will be adhered to. However, this should not discourage them from making such provisions as they wish in the hope that their instructions will be carried out.

Bodies for medical study were once acquired by laboratories through what has been termed default. In most places, bodies of indigent and other bodies unwanted or unclaimed by relatives were allocated by law to medical institutions. This situation no longer exists. Few people in our prosperous country are denied whatever disposition of their bodies they may wish. Nearly everyone can afford at least a modest funeral, and if an individual becomes ill and is in financial difficulties, social welfare agencies stand ready to give assistance. Although, as previously stated, the situation of medical institutions in need of bodies for research is improving, there is still a shortage for this purpose.

At a recent meeting of the Society's Committee on Public Health this subject came up for discussion. Aware of the delicacy of the subject where the public is concerned, its members nevertheless decided to request physicians, when patients signify a desire to make their bodies available to medical institutions for research purposes, to encourage them to do so.

★

Medicolegal Problems in Outer Space

"A human being may now be murdered in outer space, but under the law, as it now exists, can anyone be punished for committing such a crime? A human being may now receive personal injuries in outer space, but would he have the right to collect damages due to the negligence of some third party which caused the injuries? Are the artifacts of mankind so controlled under regulations derived from forensic medicine which, on the one hand, will prevent the spread of bacteriological and other disease to other planets and, on the other hand, also prevent the dissemination of new and strange diseases here on planet earth? Have the enlightened rules of industrial medical jurisprudence been extended to the age of man in space?"

These are some of the questions raised by Andrew G. Haley, of Washington, D. C., General Counsel for the American Rocket Society, in an article, "Medical Jurisprudence in Outer Space" in the September issue of *Archives of Environmental Health*, published by the AMA. The answers, Dr. Haley writes, are "obscured in a maze of theory—but factually the social sciences have not preceded the technical sciences into outer space. Once again civilization faces the terrifying vistas of haphazard and wholly uncontrolled adventures based upon technical developments. . . .

"The very fact that this is the first formal discussion of space medical jurisprudence shows the extent and neglect existing in the world today, and our very words constitute an invidious commentary on civilization itself. Much has been said on the subject of space medicine and decontamination of space artifacts, but the basic problems of forensic medicine had not been touched upon heretofore."

Because of limitation of space it is possible to present only fragmentary quotations from Mr. Haley's lengthy article. Suffice to say that he reviews the development of forensic medicine from its inception to the present time.

> "From the standpoint of medical jurisprudence chaos exists because the present status of national and international law is: (1) that each nation is sovereign in the 'air space' over its land mass and territorial waters; (2) that the upper limit of sovereignty actually ends where air ends; (3) that under well-known principles a nation is justified in protecting itself in air space, on the high seas, or in outer space, or anywhere else, if attacks or belligerent actions are being staged in any such areas; (4) that passage through and the use of outer space is completely free from any restrictions, if the passage or use is for peaceful purposes.
>
> "Where exactly is that point which separates airspace from what is variously (and loosely) called outer space or cosmic space, and more important, which separates the realm of national sovereignties from a domain of international space law in the making? If we can arrive at a workable definition of this point (or more accurately, line, for it is an irregular and varying boundary), a long step will have been taken toward clearing away the semantic underbrush from the site on which must be erected the structure of international space law.
>
> "It is neither possible nor necessary to lay down an absolutely rigid line between airspace and 'outer' space. Such a concept partakes of pure casuistry. . . .
>
> "The fact remains that all positive criminal and civil jurisdiction is extinguished in outer space, and all of law that now remains, in the absence of the extension of the precepts of law, are points outlined above in 3 and 4. Certainly, if a cosmic murder suspect is caught, he will be punished by the avenger under the *lex talionis*—but no civilized forum has jurisdiction to guarantee a fair trial. A person suffering personal injuries because of negligence is completely bereft of a forum and must look only to the largesse of his country. It seems that the closer we get to the moon the farther our statesmen retreat from implementing human civilization."

Among the medicolegal problems which will have to be dealt with, Mr. Haley states, are the sterilization of interplanetary probes, sanitation, injuries from radiation to crew, workers, passengers, and those due to travel at vastly higher velocities.

Mr. Haley offers many suggestions based upon what is known about outer space. Some of these will undoubtedly bear fruit; others may come too late because of the rapid development of interplanetary travel. At any rate, those who are space-minded will find Mr. Haley's article fascinating reading.

* * *

Medical Journal Advertising

Revenue from advertising in all medical journals decreased on the average by 20 to 40 per cent in the past year. The MEDICAL ANNALS was no exception. Its revenue dropped by 27 per cent. Not all of its income, of course, comes from advertising. Out of each member's dues $5.00 is set aside for the ANNALS. Thus, approximately $10,000 is made available to pay for its publication, but this represents only a fraction of its cost.

Unfortunately, not only did the ANNALS' revenue decrease, but as of the first of the year printing costs will increase by 25 per cent. Unless there is an upturn in advertising revenue the ANNALS will be published in 1962 at a substantial loss.

There are those in the medical profession here, as elsewhere, who would be happy to see the ANNALS free of any advertising. However, they should know that the Society's publication as it now is textwise could not be financed without substantial advertising revenue. If this statement were met with the answer that the Society should be content with a more modest journal, it should be pointed out that much excellent scientific material now available to the Editor would be lost to readers.

Washington is rapidly becoming one of the country's leading medical centers. As a result, the ANNALS receives many more papers for publication than in the past and its reputation as a first-rate medical journal has reached a new high. Naturally, it is the hope of the Editor that nothing will impede the journal's progress, and this requires money.

The ANNALS is a member of the State Medical Journal Advertising Bureau, with headquarters in Chicago. The Bureau obtains national advertising for most state journals which they could not do for themselves. In addition, the Bureau has its own Advertising Committee, consisting of three physicians of long experience in screening medical advertising. They will not approve any advertisement which does not meet its high standards. The Chairman of the Committee is Dr. Stanley B. Weld, of Hartford, Connecticut, former Editor of *Connecticut Medicine.* Members are Dr. Walter E. Vest, Editor of the *West Virginia Medical Journal,* and Dr. Wingate M. Johnson, Editor of the *North Carolina Medical Journal.*

It is no secret that the reason for the decrease in advertising revenue of medical journals has been largely due to hearings held by the House Committee on Interstate and Foreign Commerce, otherwise known as the Kefauver Committee, and the uncertainty as regards legislation affecting drug companies. Of special concern has been certain provisions of H.R. 6471, a bill which would promote a more full disclosure in regard to drugs.

In appearing before the Committee, Dr. Theodore G. Klumpp, President of Winthrop Laboratories, stated that in his opinion the purpose of the legislation was entirely consistent with the policy of the Pharmaceutical Manufacturers Association. However, in its present form, he said it was "extreme and would be unworkable" unless there were modifications.

Section 15 of the Federal Trade Commission Act, he said, now provides that if an advertisement of a drug to the medical profession sets forth the formula of the drug quantitatively it does not violate the Act "unless the advertisement contains a false representation of a material fact." It also specifies that labeling of a drug is not advertising and, therefore, not subject to the jurisdiction of the Federal Trade Commission. Congress has charged the Food and Drug Administration with the responsibility of seeing to it that drugs be labeled "promptly, fully and properly."

H.R. 6471 would delete the provisions of Section 15 of the Trade Commission Act dealing with advertising of drugs which is disseminated to the medical profession. In accordance with the new provisions, advertisements of prescription drugs would be "misleading in a material respect" and therefore subject to suit by the Federal Trade Commission if "the side-effects and contraindications of drugs" were not listed.

There are various facets of this Section which might be dealt with, but these comments are primarily concerned with advertising in state medical journals. Dr. Klumpp says that if the proposed legislation were enacted, Congress would no longer recognize the medical profession as constituting a special audience in so far as drug advertising is concerned. In effect, Congress would take the position that "physicians are prescribing prescription drugs merely on the basis of advertisements about them and without consulting either their professional experience or available literature. . . ."

"The allegation or implication that they are prescribing drugs without having sufficient information about them," Dr. Klumpp contends, is "completely without foundation. . . ."

"Once the proper role of medical journal advertising is understood, it becomes readily apparent that there are important practical limitations upon what the pharmaceutical manufacturer should be required to include in the advertisement:

"First and foremost, the advertisement obviously cannot include all the pertinent information about a drug that is relevant to a doctor's decision on whether to prescribe it. A medical journal advertisement is usually a half page or a full page in size. Smaller companies may only be able to afford a quarter page or less. . . . It is obvious that all of the pertinent information which the company supplies to the physician—and which the Food and Drug Administration properly requires him to supply—cannot possibly be printed on a quarter page, a half page or a full page, except in type so small that it cannot or will not be read. The problem is very much like trying to print the Declaration of Independence on the head of a pin.

"Apart from the physical limitations on the amount of information that can be squeezed into a medical journal advertisement, there is the problem of readability. There is no law requiring pharmaceutical companies to buy advertisements in medical journals. They are bought only because they perform a commercial function—the function of calling attention to a drug about which the doctor has already been informed through other means of communication. They will perform this function only if they attract the doctor's eye and if the copy can be readily perused. . . .

". . . It should be noted that pharmaceutical advertising is the principal source of income of the medical journals. The scientific articles appearing in these journals are one of the most important sources of current education for the medical specialist and general practitioner. In my opinion, the proposed requirements placed on medical journal advertising will serve to destroy the commercial function of such advertising. This means inevitably that many of the medical journals will be forced out of business. If this happens, a valuable source of medical knowledge would be lost to the profession."

The net effect, Dr. Klumpp states, would be a decrease in the number of medical journals because of loss of advertising revenue, and would seriously delay bringing important scientific information to the attention of the medical profession.

To resolve the issue raised by the Committee and at the same time make certain that medical journal advertising inform the physician-reader as to the appropriate literature about side-effects and contraindications, Dr. Klumpp proposed that H.R. 6471 be amended to provide that all advertisements of prescription drugs include the following statement: "Before prescribing be sure to consult the manufacturer's literature for information about possible side-effects and contraindications."

Dr. Klumpp agreed that adoption of such an amendment would preserve the accepted character of prescription drug advertisements as essentially reminder pieces; that medical journals would be allowed to continue their important role of providing the physicians with current scientific reports; that thereby further attention would be directed to the full disclosure program of the Food and Drug Administration and other groups; that the traditional roles and functions of the Federal Trade Commission and the Food and Drug Administration would be preserved; and that manufacturers and editors would be allowed to make their advertising judgments with certainty as to the law's requirements.

H. R. 6471 will undoubtedly receive further consideration in the coming Congress. What happens may decide the fate of state medical journals. The American Medical Association has opposed H.R. 6471, and its position will certainly have the support of all editors of state medical journals.

T. W.

NATIONAL HEMOGLOBIN SURVEY

In order to stimulate interest in the accuracy of hemoglobin measurements, the College of American Pathologists' Standards Committee announces a National Hemoglobin Survey available to all physicians and hospitals.

Hemoglobin measurement is one of the fundamental screening measurements in the practice of medicine. The decision for the need for blood transfusions rests upon this test. It has been shown that inaccurately calibrated hemoglobin photometers may lead to unnecessary transfusions.[1] Accurate diagnosis and treatment of hematologic disorders also depend upon reliable hemoglobin measurements.

Hemoglobin measurements must be consistent from year to year so that patients have the benefit of continued observations. Therefore, photoelectric photometers used for hemoglobin measurements should be frequently calibrated with a stable hemoglobin standard.[2]

Participants will receive a set of survey samples as well as a critique on the accuracy and precision of hemoglobin measurements plus suggestions for increasing the reproducibility under practical conditions. Questions concerning calibration of photometers for hemoglobin measurement may also be directed to the Committee.

Those who wish to participate in this hemoglobin survey may do so by sending $10.00 to the Standards Committee, College of American Pathologists, Prudential Plaza, Chicago 1, Illinois.

NIH STUDY OF WHIPPLE'S DISEASE

The coöperation of physicians is requested in a comprehensive study of Whipple's disease currently in progress at the Clinical Center of the National Institutes of Health. This disease tends to occur in middle-aged males and in its fully expressed form it is characterized by a non-crippling arthritis, diarrhea with malabsorption, abdominal distention, cough, weight loss, and asthenia. The diagnosis can be established with certainty by obtaining biopsies of peripheral lymph nodes or of intestinal mucosa, and demonstrating the presence of macrophages containing material that stains with the periodic acid-Schiff (PAS) stain.

The purpose of the study, conducted by the National Institute of Arthritis and Metabolic Diseases, is to investigate therapeutic measures that are capable of producing remissions of this otherwise fatal disorder and, possibly, to gain insight into the underlying mechanisms responsible for this strange disease. Patients are needed who have either sufficient circumstantial evdence to warrant suspecting this disorder or definite proof of the presence of the disease. Those patients who are admitted to the study will undergo an initial clinical evaluation to confirm the diagnosis and will then be placed on regimens designed to produce remissions of their disease. The duration of a patient's stay will be determined primarily by the manner in which he responds to such treatment.

Upon completion of the studies, patients will be returned to the care of their referring physicians and complete summaries of the Clinical Center's evaluations will be sent to their physicians. It is sometimes desirable to arrange for occasional follow-up visits by the patients. These, however, supplement rather than substitute for visits to the patients' personal physicians.

Physicians interested in the possibility of referring individual patients should write or telephone Dr. Leonard Laster, Senior Investigator, Gastroenterology Unit, National Institute of Arthritis and Metabolic Diseases, Bethesda 14, Md.; telephone 496-4201.

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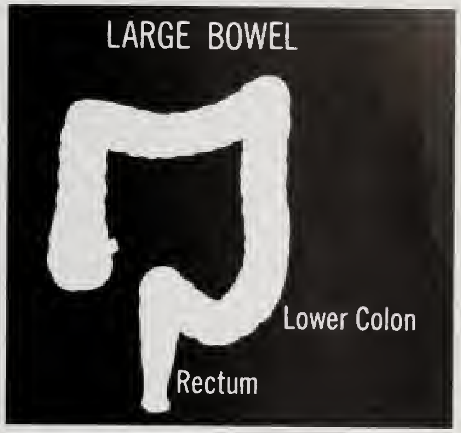
[1] PAS Report No. 36, Hemoglobin Commission on Professional and Hospital Activities Committee, Ann Arbor, Michigan.

[2] The Standards Committee recommends the use of the National Research Council Cyanmethemoglobin Standard Certified by the Standards Laboratory of the College of American Pathologists for its stability and its ease of use. The Standard is available from Ortho Pharmaceutical, Michael Reese, and Hycel Company.

DOCTOR!

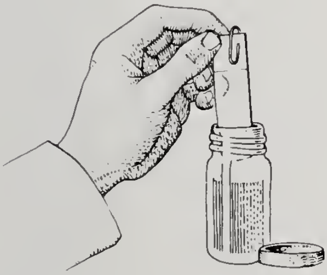
ENCOURAGE YOUR PATIENTS TO SEE THE FOLLOWING LIFE-SAVING FILMS AVAILABLE FROM THE AMERICAN CANCER SOCIETY:



LIFE STORY

16 mm. color and sound; running time, 14½ minutes

It is the true story of Harry Leonard, whose life was saved because he had an examination of the colon and rectum in time. The message is authoritative, factual, and convincing.



Fixing Slides

TIME AND TWO WOMEN

16 mm. color, sound; 22 minutes. *For women only.*

A cytology film featuring the case histories of two women. A carefully controlled presentation on cancer of the uterus emphasizing the curability of the disease in this site.

BREAST SELF-EXAMINATION

16 mm. color, sound; 16 minutes. *For women only.*

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DAVIDSON LECTURER AND PANELISTS

The Medical Society's Committee on Liaison with the Clergy, which sponsored the FIRST ANNUAL DAVIDSON LECTURE ON RELIGION AND MEDICINE in the Medical Society's auditorium, Wednesday evening, November 8, was pleased with the good attendance and the receptive audience.

DR. FRANK J. SLADEN, Consultant in Medicine to the Henry Ford Hospital in Detroit, the Lecturer, presented "The Relation of Religion to Medicine" as the topic for consideration. A lively panel discussion followed. Above are the speaker and the panelists; from left to right:

FATHER T. J. O'DONNELL, Professorial Lecturer, Georgetown University School of Medicine

CANON RICHARD WILLIAMS of the Washington Cathedral

DR. JOHN PARKS, Dean of George Washington University School of Medicine

DR. SLADEN

RABBI NORMAN GERSTENFELD of the Washington Hebrew Congregation

DR. ZIGMOND M. LEBENSOHN, Chairman of the Committee, who served as moderator for the discussion.

DOCTOR DIPLOMATS

Five physicians from Tulsa, Oklahoma, members of the First Presbyterian Church of Tulsa, are giving up their practices for six-week periods to serve voluntarily at the Miraj Medical Center in Miraj, India.

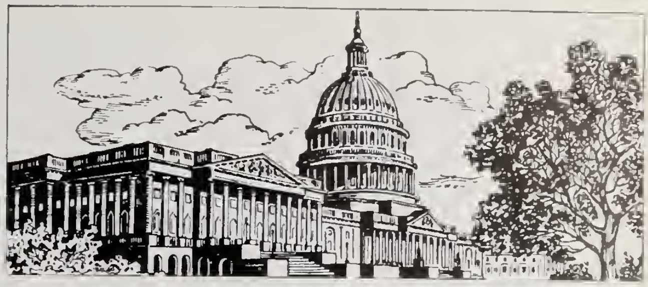
Dr. C. S. Lewis, one of these five Tulsa physicians, recently reported to the AMA on the progress of the project labeled "Doctors in Asia."

The first of the group of volunteer physicians flew to Miraj in mid-August. He returned at the end of September and the next doctor made the trip. In all, the five physicians will donate a total of 30 weeks to the program. The project is endorsed by the Tulsa County Medical Society. Funds for medical equipment, transportation, and other expenses were raised through church and public contributions.

Other groups of American physicians are also becoming interested in the possibility of initiating a similar venture in their own communities. For example, several doctors met with Dr. Lewis during his AMA visit to discuss the feasibility of adopting an overseas program which would provide medical care to another area of the world equally in need of such assistance.

Still another example of American physicians demonstrating their interest and willingness to serve in foreign mission fields on a temporary basis is shown by the large number of doctors who have written to the AMA Department of International Health in the last few months to inquire about such service. This new Department administers a program approved last June by the AMA House of Delegates whereby members of the Association may volunteer for service in the foreign mission fields on a temporary basis when emergencies arise. Coöperating with the AMA in this program are missionary agencies representing every denomination sponsoring American medical missionaries.

Physicians interested in volunteering for such service are asked to write directly to the AMA Department of International Health, 535 North Dearborn Street, Chicago 10, Illinois.



NEWS & PERSONALS

General News

Dr. James W. Watts, Chairman, presided at the regular meeting of the **Executive Board of the Medical Society of the District of Columbia,** October 25. Dr. Zigmond M. Lebensohn was selected as the Kober Lecturer for 1962. The Medical Society chooses the Kober Lecturer every third year.

A motion was made and carried that Drs. Henry D. Ecker, Frank S. Pellegrini, and Leonard T. Peterson be nominated to succeed themselves as members of the Board of Trustees of Medical Service of the District of Columbia, each for a three-year term. (Because of Dr. Ecker's inability to serve, Dr. Alfred Brigulio was nominated in his place.)

A motion was also sustained that Dr. Howard P. Parker be nominated to succeed himself as a member of the Board of Trustees of Group Hospitalization, Inc., for a term of five years.

The Secretary read a letter to the Board from Dr. F. J. L. Blasingame, Executive Vice President of the AMA, which stated that Dr. Raymond T. Holden and Dr. Oscar B. Hunter, Jr. have been nominated for membership on the AMA's Council on National Security.

Dr. Gordon W. Daisley, Jr. and Dr. John M. Keshishian were appointed to represent the Society in the Health Conference of the Health and Welfare Council of the National Capital Area. According to Mr. Walter O. Cromwell, Health Conference Secretary, the Conference has a membership of 128 persons, representing 66 agencies in the Washington Metropolitan Area. The forthcoming open meetings of the Conference are scheduled for December 12, February 13, and April 10. These are luncheon meetings.

President Stubbs submitted the names of Dr. P. S. Constantinople, Chairman, Drs. W. Montague Cobb, Robert Day, Paul Elsberg, and Christine Kehne to serve as an Interim Orchestra Committee. This Committee will report to the new President on the advisability of reorganizing the doctors' orchestra.

Competitive examinations for appointment of physicians as **Medical Officers in the Regular Corps of the United States Public Health Service Commissioned Corps** will be held on February 13, 14 and 15, 1962. Appointments provide opportunities for career service in clinical medicine, research, and preventive medicine-public health. They will be made in the PHS officer grades of Assistant Surgeon and Senior Assistant Surgeon, equivalent to Navy ranks of Lieutenant (j.g.) and Lieutenant, respectively. Entrance pay for Assistant and Senior Assistant Surgeons with dependents is nearly $8,000 a year. Requirements include U. S. citizenship and graduation from a recognized school of medicine.

Application forms and other needed information may be obtained by writing to the Surgeon General, United States Public Health Service (P), Washington 25, D. C. Completed application forms must be received no later than January 5, 1962.

Dr. Marvin E. Perkins was sworn in, October 31, by Mayor Robert F. Wagner as New York City's first Commissioner of Mental Health Services. Since January, 1960 he has been the City's Director of Community Mental Health Services and the Chief Executive Officer of the New York City Community Mental Health Board.

Dr. Perkins is a former member of the D. C. Medical Society. During the years 1955 to 1960, when he was affiliated with the Department of Public Health in the District of Columbia, he organized and was Chief of the Department's Bureau of Mental Health.

MEDAL PRESENTED TO FLORIDA PHYSICIAN

Dr. Ralph Jones (center), of Miami, Florida, receives the Pan American Medical Society's first medal for outstanding service during a dinner held at the Mayflower Hotel, November 5. Dr. Bernard E. Nunez (left), President of the Society, made the presentation. To the right is sculptor Felix de Weldon, who executed the medal.

The Pan American Medical Society held its regular dinner meeting on Sunday, November 5, in the Chinese Room of the Mayflower Hotel. Its first medal for outstanding service by a physician was presented to Dr. Ralph Jones, who is Professor and Chairman of the Department of Medicine at the University of Miami. The award was made to Dr. Jones for his assistance to those physicians who have fled from Cuba since Fidel Castro seized control.

The medal was designed by the well-known sculptor, Mr. Felix DeWeldon, whose Iwo Jima monument is familiar to Washingtonians. Mr. DeWeldon was a guest of honor at the dinner and participated in the presentation.

Mr. George B. Griffenhagen has been named Editor of the *Journal of the American Pharmaceutical Association* commencing with the January 1962 issue. Mr. William S. Apple, who has been serving as *Journal* Editor since 1959, will relinquish his editorial duties in order to devote more time to the operations of the Association as General Manager. Mr. Griffenhagen has been on the editorial staff for the past eight years and has served as Managing Editor of the *APhA Journal* since 1959.

The Washington Office of the American Medical Association has moved to One Farragut Square South, Washington 6, D. C. The telephone number remains the same—783-8155.

The headquarters office of the **National Society for Medical Research** was moved from Chicago, October 16, to Rochester, Minnesota, where the President of the Society, Dr. Hiram Essex, is associated with the Mayo Foundation for Medical Education and Research. The offices of the Society are located at 111 Fourth Street, S.E.

Personals

Dr. Brian Blades, Professor and head of the Department of Surgery at George Washington University School of Medicine, has been named the Lewis Saltz Professor of Surgery. This is a new chair established by the Lewis Saltz Medical Foundation at George Washington University through the will of the late Lewis Saltz, Washington businessman, who died in 1958. The appointment of Dr. Blades to the Saltz Professorship was announced October 18, the anniversary of the birth of the late Mr. Saltz.

Dr. Milton Gusack is a member of the Board of Managers of the Foundation.

Dr. John W. Lawlah has been appointed by the District Commissioners to a three-year term on the Public Health Advisory Council. Dr. Lawlah is Clinical Professor of Radiology at Howard University College of Medicine. He was Dean of the College from 1941 to 1946 and served concurrently, 1942–44, as Superintendent of Freedmen's Hospital.

Dr. Louis J. Goffredi, Chief of Surgery at Providence Hospital, was one of 11 distinguished alumni of Catholic University who were honored at a banquet, November 18, at the Sheraton-Park Hotel during its homecoming celebration. Dr. Goffredi received his medical degree from George Washington University in 1938. He interned and served a residency in surgery at Providence Hospital, continuing on the staff of Providence as Attending Surgeon. He is Clinical Instructor of Surgery at Georgetown University School of Medicine.

Dr. Joseph F. Fazekas, who is on the staff of the New England Center Hospital in Boston, has been promoted to Associate Professor of Neurology at Tufts University School of Medicine.

Dr. William B. Walsh, founder and President of Project HOPE, was presented with a 30-pound chocolate replica of the hospital ship HOPE, October 16, by Mr. C. M. McMillan, Executive Secretary of the National Candy Wholesalers Association, and Mr. Bradshaw Mintener, Executive Director of the Chocolate Manufacturers Association. The donors described Dr. Walsh's project as "the sweetest accomplishment of the year."

Dr. James A. O'Keeffe retired from duty, October 26, at the District's Police and Fire Department Clinic. He had served for nearly 35 years as a member of the Police and Fire Surgeons Board. Appropriate ceremonies at the Clinic marked the occasion.

TRAVEL NEWS

The European Tour for members of the Medical Society of the District of Columbia and their families in August of this year was voted a great success by all of the participants. Many members of the group expressed a desire for another tour in 1962 in which new areas would be covered.

With this in view, a trip is being planned by Dr. Lester Neuman in which the focal points will be the world-famous music festival in Salzburg, Austria, and the Congress of the International Academy of Pathology in Zurich, Switzerland. Members of the Medical Society may register for this meeting and take advantage of all of its privileges.

Tentative plans include leaving New York, July 11 and returning from Vienna on August 4, but a later return date may be arranged at the option of any member. The proposed itinerary is Zurich, London, Paris, Rome, Naples, Milan, Salzburg and Vienna. As on this year's trip, there will be comprehensive sightseeing in all of the countries visited.

A detailed brochure will be mailed to all of the members of the Medical Society shortly after the holidays.

WOMAN'S AUXILIARY OFFICERS

The Woman's Auxiliary to the Medical Society of the District of Columbia meets regularly in the Medical Society's library the second Wednesday of each month at 11 a.m. Mrs. Leo C. Varden, President, presides at the meetings this year. Assisting her in an advisory capacity is Mrs. J. Peter Murphy, Immediate Past President. Other officers are:

President-elect: Mrs. John E. Morris
First Vice President: Mrs. Julius J. Radice
Second Vice President: Mrs. Hugh O. House
Recording Secretary: Mrs. Clarence E. Bunge
Assistant Recording Secretary: Mrs. James M. Frawley
Corresponding Secretary: Mrs. Edward W. Nicklas
Assistant Corresponding Secretary: Mrs. J. Earl Kadan
Treasurer: Mrs. George H. Crofton
Assistant Treasurer: Mrs. Edward A. Krause

Chairmen of the committees functioning this year are:

American Medical Educational Fund: Mrs. Francis J. O'Bryan
AMA Bulletin Circulation: Mrs. Joseph J. Wallace
Civil Defense and Safety: Mrs. Herbert S. Gates
Community Services and Public Relations:
  Mrs. Hugh O. House
  Mrs. Paul F. Jaquet, Jr.
Finance: Mrs. Hugh O. House
Historian: Mrs. Albert E. Marland
House: Mrs. Frank S. Ashburn
Legislation: Mrs. Edgar E. Quayle
Membership: Mrs. James H. Scully
Mental Health: Mrs. James P. Scanlon
Parliamentarian: Mrs. G. Louis Weller, Jr.
Philanthropic: Mrs. Roger S. Williams
Program: Mrs. Jonathan M. Williams
Publicity: Mrs. Harold Heiges

Social: Mrs. John A. Reisinger
Mrs. Leonard T. Peterson
Visiting: Mrs. Robert C. Haile
Ways and Means: Mrs. George W. Ware
Mrs. I. Phillips Frohman
Editor, *Newsletter:* Mrs. Duane C. Richtmeyer
Health Careers: Mrs. Philip P. Steptoe
Bowling: Mrs. Alexander C. Leonardo
Educational: Mrs. Richard H. Spire

Membership

The following applicants for membership were duly elected to membership by the Executive Board, October 25, 1961, in accord with Chapter II, Article VIII, of the Constitution and By-laws of the Society.

Active Members

Russell L. Anderson, Jr., 1822 Fourth Street, N.W.
Joseph Bloom, 1835 Eye Street, N.W.
Alexander Breslow, George Washington University Hospital
William D. Byrne, 407 Dale Drive, Silver Spring, Md.
Fritz A. Freyhan, St. Elizabeths Hospital
George B. Green, 2716 North Nelson Street, Arlington, Va.
Magin T. Quiambao, 3343 Nichols Avenue, S.E.
David L. Rogers, 4630 Woodfield Road, Bethesda, Md.

Associate Members

Salvatore V. Battiata, 7010 18th Avenue, West Hyattsville, Md.
Till Bergemann, 3-D Crescent Road, Greenbelt, Md.
Robert E. Blount, Surgeon General's Office, Department of the Army
William H. Dickson, 4000 Tunlaw Road, N.W.
Santiago L. Garza, 5800 22nd Avenue, S.E.
Richard H. Pollen, 10511 Summit Avenue, Kensington, Md.
Franz-Joseph M. Weber, 1418 Good Hope Road, S.E.

Obituaries

GRACE GUILE PURSE, A.B., M.D.
(1888–1961)

Dr. Grace G. Purse, a general practitioner in Washington since 1928, died, October 20, 1961, at Doctors Hospital. She was a native of Bozeman, Montana, where she was born, November 23, 1888 to William Henry and Mary Ann Sheeks Guile.

Dr. Purse received her early education in the public schools of Montana, Idaho, and Oregon. She came to Washington to attend college and received both her degrees, Bachelor of Arts and Doctor of Medicine, from George Washington University, the latter in 1928. She interned at the George Washington University Hospital for a year and served an additional internship of a year at Children's Hospital. Later she studied at the Post-graduate Medical Hospital of Columbia University. She was on the courtesy staffs of the Washington hospitals.

Dr. Purse was a founder and Past President of the Women's Medical Society of the District of Columbia. She served for various periods on the faculty of George Washington University, teaching home hygiene and marriage courses. For many years she was a staff physician of the Young Women's Christian Association.

She retired from active practice last year but continued to carry on a small practice in her apartment at 5101 Cathedral Avenue, N.W.

An Active member of the Medical Society of the District of Columbia since 1931, Dr. Purse served as Second Vice President in 1941–42. She was a member of the American Medical Association and the George Washington University Medical Alumni Association

Her husband, Frank Lewis Purse, preceded her in death ten years ago. Surviving is her son, Mr. Victor Purse, who holds an executive position in the State Department. He lives at 2700 South Sixteenth Street, Arlington, Virginia.

FREDERICK HERZEL YORKOFF, B.S., M.D.
(1911–1961)

Dr. Frederick H. Yorkoff, general practitioner and an Active member of the Medical Society of the District of Columbia, died, November 3, 1961, after a brief illness. His home was at 3223 O Street, S.E., and his offices at 3127 Nichols Avenue, S.E.

Dr. Yorkoff was born in Newark, New Jersey, May 27, 1911, to Ralph and Sonia Yorkoff, and was educated in the public schools of Newark.

He graduated from the University of Virginia at Charlottesville, receiving his B.S. degree in 1932 and his medical degree in 1936. He interned at the Martha Jefferson Hospital in Charlottesville the following year and served a year's residency at the Chesapeake and Ohio Hospital at Clifton Forge, Virginia, from 1937 to 1938. He practiced in Clintwood, Virginia, until 1950. During World War II he served on the Selective Service Board of Dickinson County, Virginia.

Dr. Yorkoff opened his offices for practice in the District of Columbia in 1951. He was active in civic and community affairs and was especially interested in the proposed Southeast Hospital. He was on the staff of Casualty Hospital.

Membership in medical organizations included the American Medical Association and, since 1951, the Medical Society of the District of Columbia. He was a member of Phi Lambda Kappa fraternity and the Kiwanis Club.

His mother survives him. He also leaves his wife, Mrs. Ama Lambert Yorkoff, and three children, Sonya, Abby and Benjamin, all of the home address. He also leaves a brother, Dr. Eugene Yorkoff, of Forest Heights, D. C., an Active member of the D. C. Medical Society.

HOWARD M. PAYNE, A.B., M.D., F.A.C.P.

(1907–1961)

Dr. Howard Marshall Payne, specialist in tuberculosis, died, September 13, 1961, in Waltham, Massachusetts, after a brief illness. He was a former member of the D. C. Medical Society.

Dr. Payne was a Washingtonian, born August 18, 1907, to John C. and Neenah George Payne. His father, who lives at 654 L Street, N.E., survives him.

Dr. Payne graduated from Dunbar High School, and in 1928 from Dartmouth College he received the degree of Bachelor of Arts. After graduating from Howard University College of Medicine in 1931, he interned at Freedmen's Hospital. He was resident physician at Seaview Hospital, New York, from 1935 to 1936, followed by a year's fellowship at Phipps Institute, University of Pennsylvania. A few years later he enrolled for postgraduate study at New York University Post-Graduate Medical School.

Dr. Payne was affiliated with Freedmen's Hospital in various capacities from 1932 until he moved away from Washington in 1958. He was Chief Physician in Tuberculosis from 1941 to 1953. He was on the faculty of Howard University as Professor in Medicine from 1948 to 1954. In 1958 he went to Waltham, Mass., to become Superintendent of Middlesex County Sanatorium, the post he held at the time of his death.

Dr. Payne was very active in tuberculosis prevention work during his years in Washington. He was President of the Metropolitan Tuberculosis Conference, 1952–53, and a member of the District Commissioners' Committee on Health and Hospitals; he was Advisory Consultant to the Public Health Service (Division of Tuberculosis Control), 1946 to 1953, and Consultant in Tuberculosis to the Department of Medicine and Surgery, Veterans Administration. In 1952 he was honored for his work by being elected the first Negro Vice President of the National Tuberculosis Association.

Dr. Payne was President of the Medico-Chirurgical Society of D. C. from 1940 to 1944. He was a diplomate of the American Board of Internal Medicine, a Fellow of the American College of Physicians, and an Active member of the Medical Society of the District of Columbia from 1953 until 1959.

In addition to his father, he leaves his wife, Mrs. Kern Blackburn Payne and two sons, Howard, Jr. and William. A brother, Dr. John C. Payne, Jr., lives at 1010 Park Road, N.W., Washington.

Hospital Staphylococcal Problems—Blair

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Betamethasone in Dermatology—Gant, Gould and Weiner

(*Continued from page 725*)

per cent. Some patients who had previously failed to respond satisfactorily to other steroids did well on betamethasone.

The dosages required with betamethasone are lower than those necessary with other corticosteroids. The most effective regimen consisted of an initial daily dosage of 1.8 mg., administered for 5 days to bring acute conditions or exacerbations under control, followed by 1.2 mg. daily for an additional 5 days, and then by 0.6 mg. daily for as long as required. A regimen of 1 tablet q. 4 h. the first day, q. 6 h. the second, q. 8 h. the third, q. 12 h. the fourth, and once daily the fifth and sixth days proved exceptionally effective in severe, widespread poison ivy dermatitis.

The only side-effects seen were weight gain associated with increased appetite in a small number of cases. All laboratory parameters remained within normal ranges throughout the duration of the study.

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N.B. We gratefully acknowledge the technical assistance of Mrs. Louise Grams.

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